

CMR 2000

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# EMERGENCY RESPONSE GUIDEBOOK



A GUIDEBOOK FOR FIRST RESPONDERS  
DURING THE INITIAL PHASE OF A

dangerous goods/HAZARDOUS MATERIALS INCIDENT

## SHIPPING DOCUMENTS (PAPERS)\*

The shipping document provides vital information when responding to a hazardous materials/dangerous goods\*\* incident. The shipping document contains information needed to identify the materials involved. Use this information to initiate protective actions for your own safety and the safety of the public. The shipping document contains the proper shipping name (see blue-bordered pages), the hazard class or division of the material(s), ID number (see yellow-bordered pages), and, where appropriate, the Packing Group. In addition, there must be information available that describes the hazards of the material which can be used in the mitigation of an incident. The information must be entered on or be with the shipping document. This requirement may be satisfied by attaching a guide from the ERG2000 to the shipping document, or by having the entire guidebook available for ready reference. Shipping documents are required for most dangerous goods in transportation. Shipping documents are kept in

- the cab of the motor vehicle,
- the possession of the train crew member,
- a holder on the bridge of a vessel, or
- an aircraft pilot's possession.

EMERGENCY CONTACT 1-000-000-0000		<div style="border: 1px solid black; padding: 2px; display: inline-block;"> <b>EXAMPLE OF EMERGENCY RESPONSE TELEPHONE NUMBER</b> </div>		
NO. & TYPE OF PACKAGES	DESCRIPTION OF ARTICLES	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> <b>HAZARD CLASS OR DIVISION NO.</b> </div>		QUANTITY
I TANK TRUCK	ISOPROPANOL	3	UN1219	II 3,000 LITERS
	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> <b>SHIPPING NAME</b> </div>	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> <b>ID NUMBER</b> </div>	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> <b>PACKING GROUP</b> </div>	

### EXAMPLE OF PLACARD AND PANEL WITH ID NUMBER

The 4-digit ID Number may be shown on the diamond-shaped placard or on an adjacent orange panel displayed on the ends and sides of a cargo tank, vehicle or rail car.



A Numbered  
Placard

or

A Placard  
and an  
Orange Panel



**1219**

\* For the purposes of this book, the terms shipping document/shipping paper are synonymous.

\*\* For the purposes of this book, the terms hazardous materials/dangerous goods are synonymous.

**RESIST RUSHING IN !**  
**APPROACH INCIDENT FROM UPWIND**  
**STAY CLEAR OF ALL SPILLS, VAPORS, FUMES AND SMOKE**

**HOW TO USE THIS GUIDEBOOK DURING AN INCIDENT INVOLVING  
DANGEROUS GOODS**

**ONE** IDENTIFY THE MATERIAL BY FINDING ANY ONE OF THE FOLLOWING:

THE 4-DIGIT ID NUMBER ON A PLACARD OR ORANGE PANEL

THE 4-DIGIT ID NUMBER (after UN/NA) ON A SHIPPING DOCUMENT OR PACKAGE

THE NAME OF THE MATERIAL ON A SHIPPING DOCUMENT, PLACARD OR PACKAGE

IF AN ID NUMBER OR THE NAME OF THE MATERIAL CANNOT BE FOUND, SKIP TO THE NOTES BELOW.

**TWO** LOOK UP THE MATERIAL'S 3-DIGIT GUIDE NUMBER IN EITHER:

THE ID NUMBER INDEX..(the yellow-bordered pages of the guidebook)

THE NAME OF MATERIAL INDEX..(the blue-bordered pages of the guidebook)

If the guide number is supplemented with the letter "P", it indicates that the material may undergo violent polymerization if subjected to heat or contamination.

If the index entry is highlighted (in either yellow or blue), it is a TIH (Toxic Inhalation Hazard) material or a Dangerous Water Reactive Material (produces toxic gas upon contact with water).

**LOOK FOR THE ID NUMBER AND NAME OF THE MATERIAL IN THE TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES** (the green-bordered pages). Then, if necessary, **BEGIN PROTECTIVE ACTIONS IMMEDIATELY** (see Protective Actions on page 314). If protective action is not required, use the information jointly with the 3-digit guide.

**USE GUIDE 112 FOR ALL EXPLOSIVES EXCEPT FOR EXPLOSIVES 1.4 (EXPLOSIVES C) WHERE GUIDE 114 IS TO BE CONSULTED.**

**THREE** TURN TO THE NUMBERED GUIDE (the orange-bordered pages) AND READ CAREFULLY.

**NOTES** IF A NUMBERED GUIDE CANNOT BE OBTAINED BY FOLLOWING THE ABOVE STEPS, AND A PLACARD CAN BE SEEN, LOCATE THE PLACARD IN THE TABLE OF PLACARDS (pages 16-17), THEN GO TO THE 3-DIGIT GUIDE SHOWN NEXT TO THE SAMPLE PLACARD.

IF A REFERENCE TO A GUIDE CANNOT BE FOUND AND THIS INCIDENT IS BELIEVED TO INVOLVE DANGEROUS GOODS, TURN TO GUIDE 111 NOW, AND USE IT UNTIL ADDITIONAL INFORMATION BECOMES AVAILABLE. If the shipping document lists an emergency response telephone number, call that number. If the shipping document is not available, or no emergency response telephone number is listed, IMMEDIATELY CALL the appropriate **emergency response agency listed on the inside back cover of this guidebook**. Provide as much information as possible, such as the name of the carrier (trucking company or railroad) and vehicle number. AS A LAST RESORT, CONSULT THE TABLE OF RAIL CAR AND ROAD TRAILER IDENTIFICATION CHART (pages 18-19). IF THE CONTAINER CAN BE IDENTIFIED, REMEMBER THAT THE INFORMATION ASSOCIATED WITH THESE CONTAINERS IS FOR THE WORST CASE POSSIBLE.

## ERG2000 USER'S GUIDE

The 2000 Emergency Response Guidebook (ERG2000) was developed jointly by Transport Canada (TC), the U.S. Department of Transportation (DOT) and the Secretariat of Transport and Communications of Mexico (SCT) for use by fire fighters, police, and other emergency services personnel who may be the first to arrive at the scene of a transportation incident involving dangerous goods. **It is primarily a guide to aid first responders in quickly identifying the specific or generic hazards of the material(s) involved in the incident, and protecting themselves and the general public during the initial response phase of the incident.** For the purposes of this guidebook, the "initial response phase" is that period following arrival at the scene of an incident during which the presence and/or identification of dangerous goods is confirmed, protective actions and area securement are initiated, and assistance of qualified personnel is requested. It is not intended to provide information on the physical or chemical properties of dangerous goods.

This guidebook will assist responders in making initial decisions upon arriving at the scene of a dangerous goods incident. It should not be considered as a substitute for emergency response training, knowledge or sound judgment. ERG2000 does not address all possible circumstances that may be associated with a dangerous goods incident. It is primarily designed for use at a dangerous goods incident occurring on a highway or railroad. Be mindful that there may be limited value in its application at fixed facility locations.

ERG2000 incorporates dangerous goods lists from the most recent United Nations Recommendations as well as from other international and national regulations. Explosives are not listed individually by either proper shipping name or ID Number. They do, however, appear under the general heading "Explosives" on the first page of the ID Number index (yellow-bordered pages) and alphabetically in the Name of Material index (blue-bordered pages). Also, the letter "**P**" following the guide number in the yellow-bordered and blue-bordered pages identifies those materials which present a polymerization hazard under certain conditions; for example, Acrolein, inhibited, Guide **131P**.

First responders at the scene of a dangerous goods incident should seek additional specific information about any material in question as soon as possible. The information received by contacting the appropriate emergency response agency, the emergency response number on the shipping document, or by consulting the information on or accompanying the shipping document, may be more specific and accurate than this guidebook in providing guidance for the materials involved.

**BECOME FAMILIAR WITH THIS GUIDEBOOK BEFORE USING IT DURING AN EMERGENCY!** In the U.S., according to the requirements of the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA, 29 CFR 1910.120), and regulations issued by the U.S. Environmental Protection Agency (EPA, 40 CFR Part 311), first responders must be trained regarding the use of this guidebook.

## GUIDEBOOK CONTENTS

**1-Yellow-bordered pages:** Index list of dangerous goods in numerical order of ID number. This section quickly identifies the guide to be consulted from the ID Number of the material involved. This list displays the 4-digit ID number of the material followed by its assigned emergency response guide and the material name.

<b>For example:</b>	<b>ID No.</b>	<b>Guide No.</b>	<b>Name of Material</b>
	1090	127	Acetone

**2-Blue-bordered pages:** Index list of dangerous goods in alphabetical order of material name. This section quickly identifies the guide to be consulted from the name of the material involved. This list displays the name of the material followed by its assigned emergency response guide and 4-digit ID number.

<b>For example:</b>	<b>Name of Material</b>	<b>Guide No.</b>	<b>ID No.</b>
	Sulfuric acid	137	1830

**3-Orange-bordered pages:** This section is the most important section of the guidebook because it is where all safety recommendations are provided. It comprises a total of 62 individual guides, presented in a two-page format. Each guide provides safety recommendations and emergency response information to protect yourself and the public. The left hand page provides safety related information whereas the right hand page provides emergency response guidance and activities for fire situations, spill or leak incidents and first aid. Each guide is designed to cover a group of materials which possess similar chemical and toxicological characteristics.

The guide title identifies the general hazards of the dangerous goods covered.

**For example:**     **Guide 124 - Gases-Toxic and/or Corrosive-Oxidizing.**

Each guide is divided into three main sections: the first section describes **potential hazards** that the material may display in terms of fire/explosion and health effects upon exposure. The highest potential is listed first. The emergency responder should consult this section first. This allows the responder to make decisions regarding the protection of the emergency response team as well as the surrounding population.

The second section outlines suggested **public safety** measures based on the situation at hand. It provides general information regarding immediate isolation of the incident site, recommended type of protective clothing and respiratory protection. Suggested evacuation distances are listed for small and large spills and for fire situations (fragmentation hazard). It also directs the reader to consult the tables listing Toxic Inhalation Hazard materials (TIH) and water-reactive materials (green-bordered pages) when the material name is highlighted in the yellow-bordered and blue-bordered pages.

The third section covers **emergency response** actions, including first aid. It outlines special precautions for incidents which involve fire, spill or chemical exposure. Several recommendations are listed under each part which will further assist in the decision making process. The information on first aid is general guidance prior to seeking medical care.

**4-Green-bordered pages:** This section contains a table which lists, by ID number, TIH materials, including certain chemical warfare agents, and water-reactive materials which produce toxic gases upon contact with water. The table provides two different types of recommended safe distances which are "Initial isolation distances" and "Protective action distances." The materials are highlighted for easy identification in both numeric (yellow-bordered pages) and alphabetic (blue-bordered pages) lists of the guidebook. The table provides distances for both small (approximately 200 liters or less) and large spills (more than 200 liters) for all highlighted materials. The list is further subdivided into daytime and nighttime situations. This is necessary due to varying atmospheric conditions which greatly affect the size of the hazardous area. The distances change from daytime to nighttime due to different mixing and dispersion conditions in the air. During the night, the air is generally calmer and this causes the chemical to disperse less and therefore create a toxicity zone which is greater than would usually occur during the day. During the day, the chemical is generally dispersed by a more active atmosphere. The chemical will be present in a larger area; however, the actual area where toxic levels are reached will be smaller (due to increased dispersion). It is the quantity of the chemical that poses problems not its mere presence.

The "Initial Isolation Distance" is a distance within which all persons should be considered for evacuation in all directions from the actual spill/leak source. It is a distance (radius) which defines a circle (Initial Isolation Zone) within which persons may be exposed to dangerous concentrations upwind of the source and may be exposed to life threatening concentrations downwind of the source. For example, in the case of Compressed gas, toxic, n.o.s., ID No. 1955, Inhalation Hazard Zone A, the isolation distance for small spills is 430 meters, therefore, representing an evacuation circle of 860 meters in diameter.

For the same material, the "Protective Action Distance" is 4.2 kilometers for a daytime incident and 8.4 kilometers for a nighttime incident, these distances represent a downwind distance from the spill/leak source within which Protective Actions could be implemented. Protective Actions are those steps taken to preserve the health and safety of emergency responders and the public. People in this area could be evacuated and/or sheltered in-place. For more information, consult the INTRODUCTION TO THE TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES (pages 311-312).

### What is a TIH?

It is a liquid or a gas which is known to be so toxic to humans as to pose a hazard to health during transportation, or in the absence of adequate data on human toxicity, is presumed to be toxic to humans because when tested on laboratory animals it has an LC50 value of not more than 5000 ppm.

It is important to note that even though the term zone is used, the hazard zones do not represent any actual area or distance. The assignment of the zones is strictly a function of their Lethal Concentration 50 (LC50); for example, TIH Zone A is more toxic than Zone D. All distances which are listed in the green-bordered pages are calculated by the use of mathematical models for each TIH material.

Assignment of hazard zones:

**HAZARD ZONE A:** LC50 of less than or equal to 200 ppm,

**HAZARD ZONE B:** LC50 greater than 200 ppm and less than or equal to 1000 ppm,

**HAZARD ZONE C:** LC50 greater than 1000 ppm and less than or equal to 3000 ppm,

**HAZARD ZONE D:** LC50 greater than 3000 ppm and less than or equal to 5000 ppm.

## ISOLATION AND EVACUATION DISTANCES

Isolation or evacuation distances are shown in the guides (orange-bordered pages) and in the Table of Initial Isolation and Protective Action Distances (green-bordered pages). This may confuse users not thoroughly familiar with ERG2000.

It is important to note that some guides refer to non-TIH materials only (40 guides) and some refer to both TIH and non-TIH materials (22 guides). A guide refers to both TIH and non-TIH materials only when the following sentence appears under the title EVACUATION-SPILLS: "See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under 'PUBLIC SAFETY.'" If this sentence does not appear in the guide, then this particular guide refers to non-TIH materials only.

If you are dealing with a TIH material (highlighted entries in the index lists), the isolation and evacuation distances are found directly in the green-bordered pages. The guides (orange-bordered pages) also remind the user to refer to the green-bordered pages for evacuation specific information involving highlighted materials.

If you are dealing with a non-TIH material but the guide refers to both TIH and non-TIH materials, an immediate isolation distance is provided under the heading PUBLIC SAFETY. It applies to the non-TIH materials only. In addition, for evacuation purposes, the guide informs the user under the title EVACUATION-SPILLS to increase, for non-highlighted substances, in the downwind direction, if necessary, the immediate isolation distance listed under "Public Safety." For example, Guide 124 - Gases-Toxic and/or Corrosive-Oxidizing, instructs the user to: Isolate the spill or leak area immediately for at least 100 to 200 meters (330 to 660 feet) in all directions. In case of a large spill, the isolation area could be expanded from 100 meters to a distance deemed as safe by the On-scene-commander and emergency responders.

If you are dealing with a non-TIH material and the guide refers only to non-TIH materials, the immediate isolation and evacuation distances are specified as actual distances in the guide (orange-bordered pages) and are not referenced in the green-bordered pages.

## SAFETY PRECAUTIONS

**APPROACH CAUTIOUSLY FROM UPWIND.** Resist the urge to rush in; others cannot be helped until the situation has been fully assessed.

**SECURE THE SCENE.** Without entering the immediate hazard area, isolate the area and assure the safety of people and the environment, keep people away from the scene and outside the safety perimeter. Allow enough room to move and remove your own equipment.

**IDENTIFY THE HAZARDS.** Placards, container labels, shipping documents, material safety data sheets, Rail Car and Road Trailer Identification Charts, and/or knowledgeable persons on the scene are valuable information sources. Evaluate all available information and consult the recommended guide to reduce immediate risks. **Additional information, provided by the shipper or obtained from another authoritative source, may change some of the emphasis or details found in the guide.** Remember, the guide provides only the most important and worst case scenario information for the initial response in relation to a family or class of dangerous goods. As more material-specific information becomes available, the response should be tailored to the situation.

**ASSESS THE SITUATION.** Consider the following:

- Is there a fire, a spill or a leak?
- What are the weather conditions?
- What is the terrain like?
- Who/what is at risk: people, property or the environment?
- What actions should be taken: Is an evacuation necessary? Is diking necessary? What resources (human and equipment) are required and are readily available?
- What can be done immediately?

**OBTAIN HELP.** Advise your headquarters to notify responsible agencies and call for assistance from qualified personnel.

**DECIDE ON SITE ENTRY.** Any efforts made to rescue persons, protect property or the environment must be weighed against the possibility that you could become part of the problem. Enter the area only when wearing appropriate protective gear (see **PROTECTIVE CLOTHING**, page 364).

**RESPOND.** Respond in an appropriate manner. Establish a command post and lines of communication. Rescue casualties where possible and evacuate if necessary. Maintain control of the site. Continually reassess the situation and modify the response accordingly. The first duty is to consider the safety of people in the immediate area, including your own.

**ABOVE ALL** — Do not walk into or touch spilled material. Avoid inhalation of fumes, smoke and vapors, even if no dangerous goods are known to be involved. Do not assume that gases or vapors are harmless because of lack of a smell—odorless gases or vapors may be harmful.



## WHO TO CALL FOR ASSISTANCE

Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Follow the steps outlined in your organization's standard operating procedures and/or local emergency response plan for obtaining qualified assistance. Generally, the notification sequence and requests for technical information beyond what is available in this guidebook should occur in the following order:

### **1. ORGANIZATION/AGENCY**

Notify your organization/agency. This will set in motion a series of events based upon the information provided. Actions may range from dispatching additional trained personnel to the scene to activating the local emergency response plan. Ensure that local fire and police departments have been notified.

### **2. EMERGENCY RESPONSE TELEPHONE NUMBER**

Locate and call the telephone number listed on the shipping document. The person answering the phone at the listed emergency response number must be knowledgeable of the materials and mitigation actions to be taken, or must have immediate access to a person who has the required knowledge.

### **3. NATIONAL ASSISTANCE**

Contact the appropriate emergency response agency listed on the inside back cover of this guidebook when the emergency response telephone number is not available. Upon receipt of a call describing the nature of the incident, the agency will provide immediate advice on handling the early stages of the incident. The agency will also contact the shipper or manufacturer of the material for more detailed information and request on-scene assistance when necessary.

Collect and provide as much of the following information as can safely be obtained to your chain-of-command and specialists contacted for technical guidance:

Your name, call back telephone number, FAX number

Location and nature of problem (spill, fire, etc.)

Name and identification number of material(s) involved

Shipper/consignee/point of origin

Carrier name, rail car or truck number

Container type and size

Quantity of material transported/released

Local conditions (weather, terrain, proximity to schools, hospitals, waterways, etc.)

Injuries and exposures

Local emergency services that have been notified

## CANADA

### 1. CANUTEC

**CANUTEC** is the **Canadian Transport Emergency Centre** operated by the Transport Dangerous Goods Directorate of Transport Canada.

**CANUTEC** provides a national bilingual (French and English) advisory service and is staffed by professional chemists experienced and trained in interpreting technical information and providing emergency response advice.

**In an emergency, CANUTEC may be called collect at  
613-996-6666 (24 hours)  
\*666 cellular (Press Star 666, Canada only)**

In a non-emergency situation, please call the information line at 613-992-4624 (24 hours).

### 2. PROVINCIAL AGENCIES

Although technical information and emergency response assistance can be obtained from **CANUTEC**, there are federal and provincial regulations requiring the reporting of dangerous goods incidents to certain authorities.

The following list of provincial agencies is supplied for your convenience.

<b>Province</b>	<b>Emergency Authority and/or Telephone Number</b>
Alberta .....	Local Police and Provincial Authorities 1-800-272-9600*
British Columbia .....	Local Police or 1-800-663-3456
Manitoba .....	Local Police or fire brigade, as appropriate, or 204-945-4888
New Brunswick .....	Local Police or 1-800-565-1633** or 902-426-6030
Newfoundland .....	Local Police or 709-772-2083
Northwest Territories .....	867-920-8130
Nova Scotia .....	Local Police or 1-800-565-1633** or 902-426-6030
Nunavut .....	867-920-8130
Ontario .....	Local Police
Prince Edward Island .....	Local Police or 1-800-565-1633** or 902-426-6030
Quebec .....	Local Police
Saskatchewan .....	Local Police or 1-800-667-7525
Yukon Territory .....	867-667-7244

\* This number is not accessible from outside Alberta.

\*\* This number is not accessible from outside of New Brunswick, Nova Scotia or Prince Edward Island.

NOTE:

1. The appropriate federal agency must be notified in the case of rail, air or marine incidents.
2. The nearest police department must be notified in the case of lost, stolen or misplaced explosives, radioactive materials or infectious substances.
3. **CANUTEC must** be notified in the case of:
  - a. lost, stolen or misplaced infectious substances;
  - b. an incident involving infectious substances;
  - c. an incident where the shipping documents display **CANUTEC's** telephone number 613-996-6666 as the emergency telephone number; or
  - d. a dangerous goods incident in which a railway vehicle is involved.

## UNITED STATES

1. **CHEMTREC®**, a 24-hour emergency response communication service, can be reached as follows:

CALL **CHEMTREC®** (24 hours)

**1-800-424-9300**

(Toll-free in the U.S., Canada, and the U.S. Virgin Islands)

For calls originating elsewhere:

**703-527-3887** (Collect calls are accepted)

or

2. **CHEM-TEL, INC.**, a 24-hour emergency response communication service, can be reached as follows:

CALL **CHEM-TEL, INC.** (24 hours)

**1-800-255-3924**

(Toll-free in the U.S., Canada, and the U.S. Virgin Islands)

For calls originating elsewhere:

**813-248-0585** (Collect calls are accepted)

or

3. **INFOTRAC**, a 24-hour emergency response communication service, can be reached as follows:

CALL **INFOTRAC** (24 hours)

**1-800-535-5053**

(Toll-free in the U.S., Canada, and the U.S. Virgin Islands)

For calls originating elsewhere:

**352-323-3500** (Collect calls are accepted)

or

4. **3E COMPANY**, a 24-hour emergency response communication service, can be reached as follows:

CALL **3E COMPANY** (24 hours)

**1-800-451-8346**

(Toll-free in the U.S., Canada, and the U.S. Virgin Islands)

For calls originating elsewhere:

**760-602-8703** (Collect calls are accepted)

The emergency response information services shown above have requested to be listed as providers of emergency response information and have agreed to provide emergency response information to all callers. They maintain periodically updated lists of state and Federal radiation authorities who provide information and technical assistance on handling incidents involving radioactive materials.

**5. NATIONAL RESPONSE CENTER (NRC)**

The NRC, which is operated by the U.S. Coast Guard, receives reports required when dangerous goods and hazardous substances are spilled. After receiving notification of an incident, the NRC will immediately notify the appropriate Federal On-Scene Coordinator and concerned Federal agencies. Federal law requires that anyone who releases into the environment a reportable quantity of a hazardous substance (including oil when water is, or may be affected) or a material identified as a marine pollutant, must **immediately** notify the NRC. When in doubt as to whether the amount released equals the required reporting levels for these materials, the NRC should be notified.

**CALL NRC (24 hours)**

**1-800-424-8802**

(Toll-free in the U.S., Canada, and the U.S. Virgin Islands)

**202-267-2675** in the District of Columbia

Calling the emergency response telephone number, CHEMTREC®, CHEM-TEL, INC., INFOTRAC or 3E COMPANY, does not constitute compliance with regulatory requirements to call the NRC.

**6. MILITARY SHIPMENTS**

For assistance at incidents involving materials being shipped by, for, or to the Department of Defense (DOD), call one of the following numbers (24 hours):

**703-697-0218** (call collect) (U.S. Army Operations Center) for incidents involving explosives and ammunition.

**1-800-851-8061** (toll free in the U.S.) (Defense Logistics Agency) for incidents involving dangerous goods other than explosives and ammunition.

The above numbers are for **emergencies** only.

## MEXICO

1. **SETIQ** (Emergency Transportation System for the Chemical Industry), a service of the National Association of Chemical Industries (ANIQ), can be reached as follows:

Call **SETIQ** (24 hours)

**01-800-00-214-00** in the Mexican Republic

For calls originating in Mexico City and the Metropolitan Area

**5559-1588**

For calls originating elsewhere, call

**0-11-52-5-559-1588**

2. **CECOM**, the National Center for Communications of the Civil Protection Agency, can be reached as follows:

CALL **CECOM** (24 hours)

**01-800-00-413-00** in the Mexican Republic

For calls originating in Mexico City and the Metropolitan Area

**5550-1496, 5550-1552, 5550-1485, or 5550-4885**

For calls originating elsewhere, call

**0-11-52-5-550-1496, or 0-11-52-5-550-1552**

**0-11-52-5-550-1485, or 0-11-52-5-550-4885**

## HAZARD CLASSIFICATION SYSTEM

The hazard class of dangerous goods is indicated either by its class (or division) number or name. For a placard corresponding to the primary hazard class of a material, the hazard class or division number must be displayed in the lower corner of the placard. However, no hazard class or division number may be displayed on a placard representing the subsidiary hazard of a material. For other than Class 7 or the OXYGEN placard, text indicating a hazard (for example, "CORROSIVE") is not required. Text is shown only in the U.S. The hazard class or division number must appear on the shipping document after each shipping name.

### **Class 1 - Explosives**

Division 1.1	Explosives with a mass explosion hazard
Division 1.2	Explosives with a projection hazard
Division 1.3	Explosives with predominantly a fire hazard
Division 1.4	Explosives with no significant blast hazard
Division 1.5	Very insensitive explosives; blasting agents
Division 1.6	Extremely insensitive detonating articles

### **Class 2 - Gases**

Division 2.1	Flammable gases
Division 2.2	Non-flammable, non-toxic* compressed gases
Division 2.3	Gases toxic* by inhalation
Division 2.4	Corrosive gases (Canada)

### **Class 3 - Flammable liquids (and Combustible liquids [U.S.])**

### **Class 4 - Flammable solids; Spontaneously combustible materials; and Dangerous when wet materials**

Division 4.1	Flammable solids
Division 4.2	Spontaneously combustible materials
Division 4.3	Dangerous when wet materials

### **Class 5 - Oxidizers and Organic peroxides**

Division 5.1	Oxidizers
Division 5.2	Organic peroxides

### **Class 6 - Toxic\* materials and Infectious substances**

Division 6.1	Toxic* materials
Division 6.2	Infectious substances

### **Class 7 - Radioactive materials**

### **Class 8 - Corrosive materials**

### **Class 9 - Miscellaneous dangerous goods**

Division 9.1	Miscellaneous dangerous goods (Canada)
Division 9.2	Environmentally hazardous substances (Canada)
Division 9.3	Dangerous wastes (Canada)

\* The words "poison" or "poisonous" are synonymous with the word "toxic".

## NOTES



## INTRODUCTION TO THE TABLE OF PLACARDS

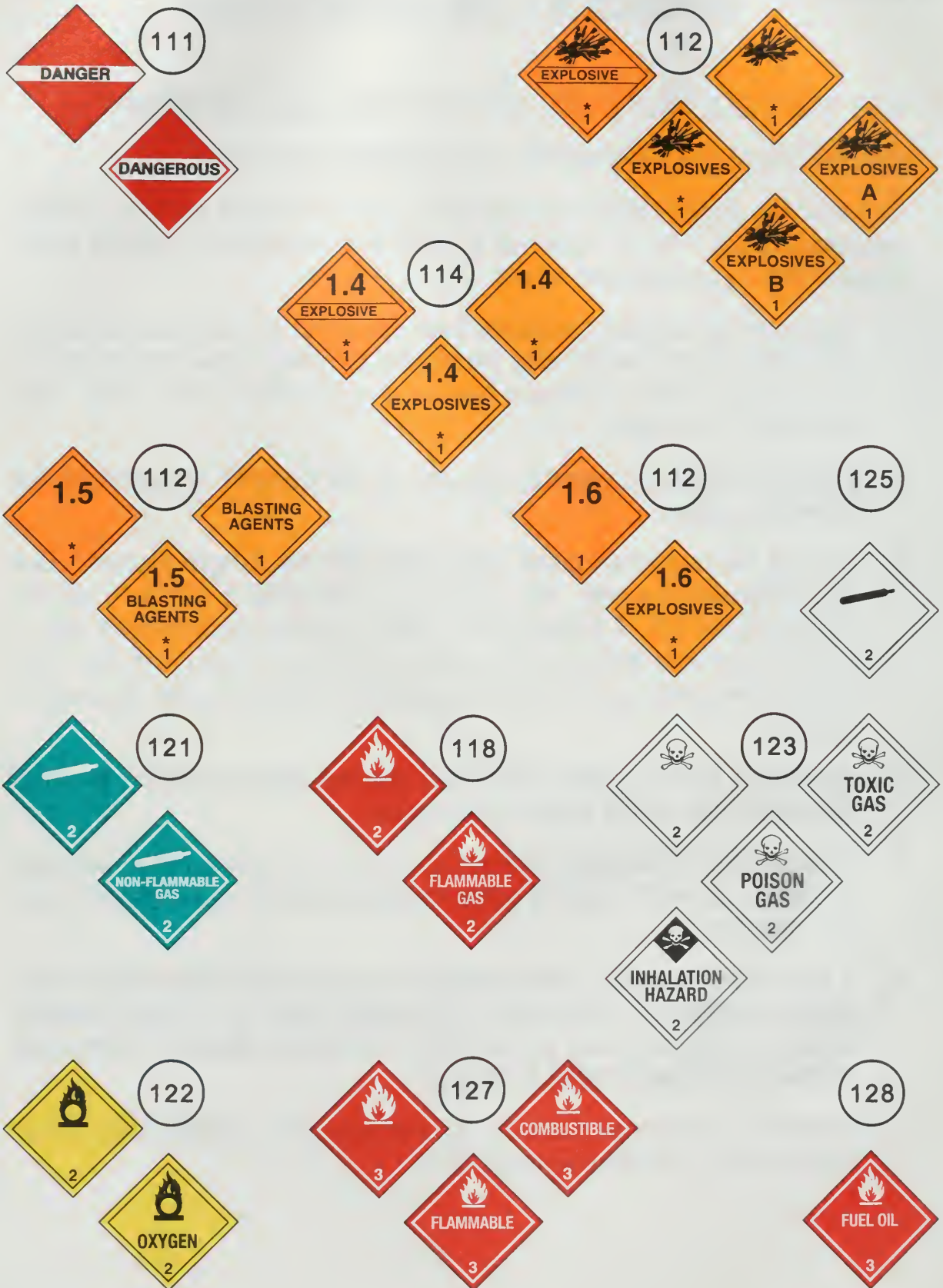
### **USE THIS TABLE ONLY IF YOU HAVE NOT BEEN ABLE TO IDENTIFY THE MATERIAL(S) IN TRANSPORT BY ID NUMBER OR NAME**

The next two pages display the placards used on transport vehicles carrying dangerous goods. As you approach a reported or suspected dangerous goods incident involving a placarded vehicle:

- 1. Approach the incident cautiously from upwind to a point from which you can safely identify and/or read the placard or orange panel information.** If wind direction allows, consider approaching the incident from uphill. Use binoculars, if available.
- 2. Match the vehicle placard(s) with one of the placards displayed on the following pages.**
- 3. Consult the numbered guide associated with the sample placard. Use that information for now.** For example, a FLAMMABLE (Class 3) placard leads to Guide **127**. A CORROSIVE (Class 8) placard leads to Guide **153**. If multiple placards point to more than one guide, initially use the most conservative guide (i.e., the guide requiring the greatest degree of protective actions).
- 4. Remember that the guides associated with the placards provide the most significant risk and/or hazard information.**
- 5. When specific information, such as ID number or shipping name, becomes available, the more specific guide recommended for that material must be consulted.**
- 6. If Guide 111 is being used because only the DANGER/DANGEROUS placard is displayed or the nature of the spilled, leaking, or burning material is not known, as soon as possible, get more specific information concerning the material(s) involved.**
- 7. Asterisks (\*) on orange placards represent explosives "Compatibility Group" letters; refer to the Glossary (page 372).**

# TABLE OF PLACARDS AND INITIAL

USE THIS TABLE ONLY IF MATERIALS CANNOT BE SPECIFICALLY IDENTIFIED BY



# RESPONSE GUIDES TO USE ON-SCENE

USING THE SHIPPING DOCUMENT, NUMBERED PLACARD, OR ORANGE PANEL NUMBER



134



136



139



143



148



153



151



158



163

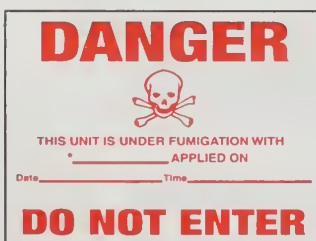


153

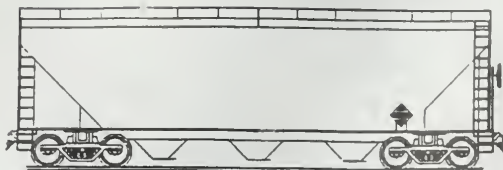


171

To be retired

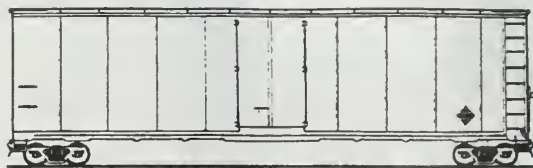


## RAIL CAR IDENTIFICATION CHART\*



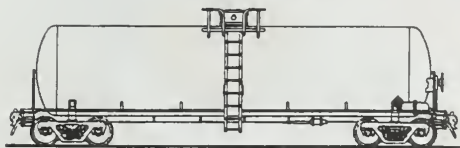
**Hopper car  
Dry bulk**

140



**Box car  
Mixed cargo**

111



**Pressurized tank car  
Compressed  
liquefied gases**

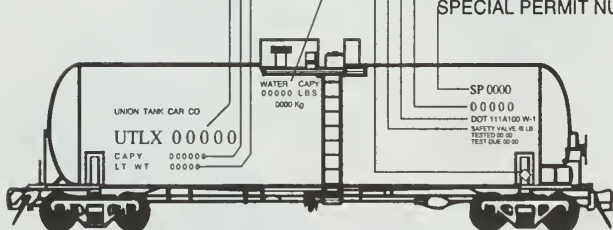
117



**Low pressure  
tank car  
Liquids**

131

- REPORTING MARKS & CAR NUMBER
- CAPACITY IN POUNDS (IF REQUIRED)
- EMPTY WEIGHT OF CAR
- WATER CAPACITY OF TANK (ON PRESSURE CARS)
- PLACARD CARD HOLDER - 4 PER CAR \*
- TANK TEST & SAFETY VALVE TEST INFORMATION
- CAR SPECIFICATION
- COMMODITY NAME \*
- SPECIAL PERMIT NUMBER



- REPORTING MARKS & CAR NUMBER
- CAPACITY IN GALLONS (IMPERIAL/US)
- PLACARD CARD HOLDER - 4 PER CAR \*

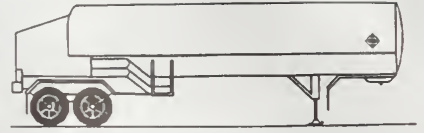
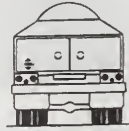
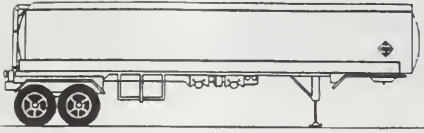
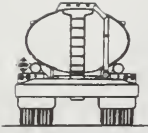
**CAUTION:** Emergency response personnel must be aware that rail tank cars vary widely in construction, fittings and purpose. Tank cars could transport products that may be solids, liquids or gases. The products may be under pressure. It is essential that products be identified by consulting shipping documents or train consist or contacting dispatch centers before emergency response is initiated.

The information stenciled on the sides or ends of tank cars, as illustrated above, may be used to identify the product utilizing:

- a. the commodity name shown; or
- b. the other information shown, especially reporting marks and car number which, when supplied to a dispatch center, will facilitate the identification of the product.

\* The recommended guides should be considered as last resort if product cannot be identified by any other means.

## ROAD TRAILER IDENTIFICATION CHART\*

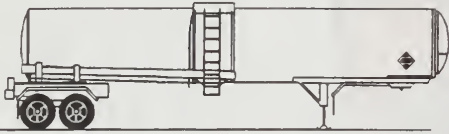
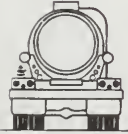


MC306 Nonpressure  
Liquid Tank

131

MC-338 Cryogenic  
Liquid Tank

117

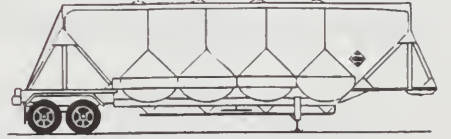


MC307 Low Pressure  
Chemical Tank

137

Compressed Gas/  
Tube Trailer

117

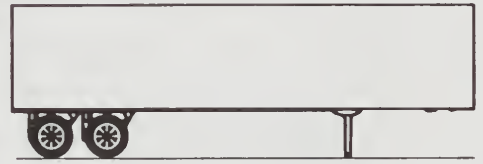
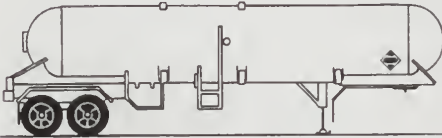
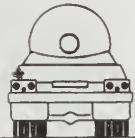


MC-312 Corrosive  
Liquid Tank

137

Dry Bulk Cargo  
Tanker

134



MC-331 High Pressure  
Tank

117

Mixed Cargo

111

**CAUTION:** This chart depicts only the most general shapes of road trailers. Emergency response personnel must be aware that there are many variations of road trailers, not illustrated above, that are used for shipping chemical products. The suggested guides are for the most hazardous products that may be transported in these trailer types.

\* The recommended guides should be considered as last resort if product cannot be identified by any other means.

HAZARD IDENTIFICATION CODES  
DISPLAYED ON SOME INTERMODAL CONTAINERS

Hazard identification codes, referred to as "hazard identification numbers" under European and some South American regulations, may be found in the top half of an orange panel on some intermodal bulk containers. The 4-digit identification number is in the bottom half of the orange panel.



The hazard identification code in the top half of the orange panel consists of two or three figures. In general, the figures indicate the following hazards:

- 2 - EMISSION OF GAS DUE TO PRESSURE OR CHEMICAL REACTION
  - 3 - FLAMMABILITY OF LIQUIDS (VAPORS) AND GASES OR SELF-HEATING LIQUID
  - 4 - FLAMMABILITY OF SOLIDS OR SELF-HEATING SOLID
  - 5 - OXIDIZING (FIRE-INTENSIFYING) EFFECT
  - 6 - TOXICITY OR RISK OF INFECTION
  - 7 - RADIOACTIVITY
  - 8 - CORROSIVITY
  - 9 - RISK OF SPONTANEOUS VIOLENT REACTION
- Doubling of a figure indicates an intensification of that particular hazard (i.e. 33, 66, 88).
  - Where the hazard associated with a material can be adequately indicated by a single figure, the figure is followed by a zero (i.e. 30, 40, 50).
  - A hazard identification code prefixed by the letter "X" indicates that the material will react dangerously with water (i.e. X88).

**HAZARD IDENTIFICATION CODES**  
**DISPLAYED ON SOME INTERMODAL CONTAINERS**

The hazard identification codes listed below have the following meanings:

20	Inert gas
22	Refrigerated gas
223	Refrigerated gas, flammable
225	Refrigerated gas, oxidizing (fire-intensifying)
23	Flammable gas
236	Flammable gas, toxic
239	Flammable gas which can spontaneously lead to violent reaction
25	Oxidizing (fire-intensifying) gas
26	Toxic gas
263	Toxic gas, flammable
265	Toxic gas, oxidizing (fire-intensifying)
266	Highly toxic gas
268	Toxic gas, corrosive
<hr/>	
30	Flammable liquid
323	Flammable liquid which reacts with water, emitting flammable gas
X323	Flammable liquid which reacts dangerously with water, emitting flammable gas
33	Highly flammable liquid
333	Pyrophoric liquid
X333	Pyrophoric liquid which reacts dangerously with water
336	Highly flammable liquid, toxic
338	Highly flammable liquid, corrosive
X338	Highly flammable liquid, corrosive, which reacts dangerously with water
339	Highly flammable liquid which can spontaneously lead to violent reaction
36	Flammable liquid, toxic, or self-heating liquid, toxic
362	Flammable liquid, toxic, which reacts with water, emitting flammable gas
X362	Flammable liquid, toxic, which reacts dangerously with water, emitting flammable gas
368	Flammable liquid, toxic, corrosive
38	Flammable liquid, corrosive
382	Flammable liquid, corrosive, which reacts with water, emitting flammable gas
X382	Flammable liquid, corrosive, which reacts dangerously with water, emitting flammable gas
39	Flammable liquid which can spontaneously lead to violent reaction
<hr/>	
40	Flammable solid, or self-reactive material, or self-heating material
423	Solid which reacts with water, emitting flammable gas

HAZARD IDENTIFICATION CODES  
DISPLAYED ON SOME INTERMODAL CONTAINERS

X423	Flammable solid which reacts dangerously with water, emitting flammable gas
43	Spontaneously flammable (pyrophoric) solid
44	Flammable solid, in the molten state at an elevated temperature
446	Flammable solid, toxic, in the molten state at an elevated temperature
46	Flammable solid, toxic, or self-heating solid, toxic
462	Toxic solid which reacts with water, emitting flammable gas
X462	Solid which reacts with water, emitting toxic gas
48	Flammable or self-heating solid, corrosive
482	Corrosive solid which reacts with water, emitting flammable gas
X482	Solid which reacts dangerously with water, emitting corrosive gas
<hr/>	
50	Oxidizing (fire-intensifying) substance
539	Flammable organic peroxide
55	Strongly oxidizing (fire-intensifying) substance
556	Strongly oxidizing (fire-intensifying) substance, toxic
558	Strongly oxidizing (fire-intensifying) substance, corrosive
559	Strongly oxidizing (fire-intensifying) substance which can spontaneously lead to violent reaction
56	Oxidizing (fire-intensifying) substance, toxic
568	Oxidizing (fire-intensifying) substance, toxic, corrosive
58	Oxidizing (fire-intensifying) substance, corrosive
59	Oxidizing (fire intensifying) substance which can spontaneously lead to violent reaction
<hr/>	
60	Toxic material
606	Infectious substance
623	Toxic liquid which reacts with water, emitting flammable gas
63	Toxic liquid, flammable
638	Toxic liquid, flammable, corrosive
639	Toxic liquid, flammable, which can spontaneously lead to violent reaction
64	Toxic solid, flammable or self-heating
642	Toxic solid which reacts with water, emitting flammable gas
65	Toxic material, oxidizing (fire-intensifying)
66	Highly toxic material
663	Highly toxic liquid, flammable
664	Highly toxic solid, flammable or self-heating
665	Highly toxic material, oxidizing (fire-intensifying)
668	Highly toxic material, corrosive



**HAZARD IDENTIFICATION CODES**  
**DISPLAYED ON SOME INTERMODAL CONTAINERS**

669	Highly toxic material which can spontaneously lead to violent reaction
68	Toxic material, corrosive
69	Toxic material which can spontaneously lead to violent reaction
<hr/>	
70	Radioactive material
72	Radioactive gas
723	Radioactive gas, flammable
73	Radioactive liquid, flammable
74	Radioactive solid, flammable
75	Radioactive material, oxidizing (fire-intensifying)
76	Radioactive material, toxic
78	Radioactive material, corrosive
<hr/>	
80	Corrosive material
X80	Corrosive material which reacts dangerously with water
823	Corrosive liquid which reacts with water, emitting flammable gas
83	Corrosive liquid, flammable
X83	Corrosive liquid, flammable, which reacts dangerously with water
839	Corrosive liquid, flammable, which can spontaneously lead to violent reaction
X839	Corrosive liquid, flammable, which can spontaneously lead to violent reaction and which reacts dangerously with water
84	Corrosive solid, flammable or self-heating
842	Corrosive solid which reacts with water, emitting flammable gas
85	Corrosive material, oxidizing (fire-intensifying)
856	Corrosive material, oxidizing and toxic
86	Corrosive material, toxic
88	Highly corrosive material
X88	Highly corrosive material which reacts dangerously with water
883	Highly corrosive liquid, flammable
884	Highly corrosive solid, flammable or self-heating
885	Highly corrosive material, oxidizing (fire-intensifying)
886	Highly corrosive material, toxic
X886	Highly corrosive material, toxic, which reacts dangerously with water
89	Corrosive material which can spontaneously lead to violent reaction
<hr/>	
90	Miscellaneous dangerous substance; environmentally hazardous substance
99	Miscellaneous dangerous substance transported at elevated temperature

**Note:** If an entry is highlighted in either the yellow-bordered or blue-bordered pages AND THERE IS NO FIRE, go directly to the Table of Initial Isolation and Protective Action Distances (green-bordered pages) and look up the ID number and name of material to obtain initial isolation and protective action distances. IF THERE IS A FIRE, or IF A FIRE IS INVOLVED, go directly to the appropriate guide (orange-bordered pages) and use the evacuation information shown under PUBLIC SAFETY.

**ID Guide Name of Material  
No. No.**

- 112 Ammonium nitrate-fuel oil mixtures
- 158 Biological agents
- 112 Blasting agent, n.o.s.
- 171 Cargo transport unit under fumigation
- 154 Chemical kits (containing corrosive substances)
- 128 Chemical kits (containing flammable liquids)
- 133 Chemical kits (containing flammable solids)
- 140 Chemical kits (containing oxidizing substances)
- 153 Chemical kits (containing poisonous liquids)
- 154 Chemical kits (containing poisonous solids)
- 153 Chemical kits (containing toxic liquids)
- 154 Chemical kits (containing toxic solids)
- 129 1-Chloroheptane
- 129 1-Chlorohexane
- 152 m-Dichlorobenzene
- 136 p-Diethylnitrosoaniline
- 153 2-Ethyl-3-propylacrolein
- 112 Explosive A
- 112 Explosive B
- 114 Explosive C
- 112 Explosives, division 1.1, 1.2, 1.3, 1.5 or 1.6
- 114 Explosives, division 1.4
- 133 Fibres, animal or vegetable, burnt, wet or damp
- 133 Fibres, vegetable, dry

**ID Guide Name of Material  
No. No.**

- 159 Methylbromoacetone
- 135 p-Nitrosodiethylaniline
- 171 Plastic molding material
- 171P Polymerizable material, stabilized with dry ice
- 153 Toxins
- 133 Wool waste, wet
- 1001 116 Acetylene
- 1001 116 Acetylene, dissolved
- 1002 122 Air, compressed
- 1003 122 Air, refrigerated liquid (cryogenic liquid)
- 1003 122 Air, refrigerated liquid (cryogenic liquid), non-pressurized
- 1005 125 Ammonia, anhydrous
- 1005 125 Ammonia, anhydrous, liquefied
- 1005 125 Ammonia solution, with more than 50% Ammonia
- 1005 125 Anhydrous ammonia
- 1005 125 Anhydrous ammonia, liquefied
- 1006 121 Argon
- 1006 121 Argon, compressed
- 1008 125 Boron trifluoride
- 1008 125 Boron trifluoride, compressed
- 1009 126 Bromotrifluoromethane
- 1009 126 Refrigerant gas R-13B1
- 1010 116P Butadienes, inhibited
- 1011 115 Butane
- 1011 115 Butane mixture
- 1012 115 Butylene
- 1013 120 Carbon dioxide
- 1013 120 Carbon dioxide, compressed
- 1014 122 Carbon dioxide and Oxygen mixture

**ID Guide Name of Material**  
**No. No.**

1014 122 Carbon dioxide and Oxygen mixture, compressed  
1014 122 Oxygen and Carbon dioxide mixture  
1014 122 Oxygen and Carbon dioxide mixture, compressed  
1015 126 Carbon dioxide and Nitrous oxide mixture  
1015 126 Nitrous oxide and Carbon dioxide mixture  
1016 119 Carbon monoxide  
1016 119 Carbon monoxide, compressed  
1017 124 Chlorine  
1018 126 Chlorodifluoromethane  
1018 126 Refrigerant gas R-22  
1020 126 Chloropentafluoroethane  
1020 126 Refrigerant gas R-115  
1021 126 1-Chloro-1,2,2,2-tetrafluoroethane  
1021 126 Chlorotetrafluoroethane  
1021 126 Refrigerant gas R-124  
1022 126 Chlorotrifluoromethane  
1022 126 Refrigerant gas R-13  
1023 119 Coal gas  
1023 119 Coal gas, compressed  
1026 119 Cyanogen  
1026 119 Cyanogen, liquefied  
1026 119 Cyanogen gas  
1027 115 Cyclopropane  
1027 115 Cyclopropane, liquefied  
1028 126 Dichlorodifluoromethane  
1028 126 Refrigerant gas R-12  
1029 126 Dichlorofluoromethane  
1029 126 Refrigerant gas R-21

**ID Guide Name of Material**  
**No. No.**

1030 115 1,1-Difluoroethane  
1030 115 Difluoroethane  
1030 115 Refrigerant gas R-152a  
1032 118 Dimethylamine, anhydrous  
1033 115 Dimethyl ether  
1035 115 Ethane  
1035 115 Ethane, compressed  
1036 118 Ethylamine  
1037 115 Ethyl chloride  
1038 115 Ethylene, refrigerated liquid (cryogenic liquid)  
1039 115 Ethyl methyl ether  
1039 115 Methyl ethyl ether  
1040 119P Ethylene oxide  
1040 119P Ethylene oxide with Nitrogen  
1041 115 Carbon dioxide and Ethylene oxide mixture, with more than 9% but not more than 87% Ethylene oxide  
1041 115 Carbon dioxide and Ethylene oxide mixtures, with more than 6% Ethylene oxide  
1041 115 Ethylene oxide and Carbon dioxide mixture, with more than 9% but not more than 87% Ethylene oxide  
1041 115 Ethylene oxide and Carbon dioxide mixtures, with more than 6% Ethylene oxide  
1043 125 Fertilizer, ammoniating solution, with free Ammonia  
1044 126 Fire extinguishers with compressed gas  
1044 126 Fire extinguishers with liquefied gas  
1045 124 Fluorine

**ID Guide Name of Material  
No. No.**

1045	124	Fluorine, compressed
1046	121	Helium
1046	121	Helium, compressed
1048	125	Hydrogen bromide, anhydrous
1049	115	Hydrogen
1049	115	Hydrogen, compressed
1050	125	Hydrogen chloride, anhydrous
1051	117	AC
1051	117	Hydrocyanic acid, aqueous solutions, with more than 20% Hydrogen cyanide
1051	117	Hydrocyanic acid, liquefied
1051	117	Hydrogen cyanide, anhydrous, stabilized
1051	117	Hydrogen cyanide, stabilized
1052	125	Hydrogen fluoride, anhydrous
1053	117	Hydrogen sulfide
1053	117	Hydrogen sulfide, liquefied
1053	117	Hydrogen sulphide
1053	117	Hydrogen sulphide, liquefied
1055	115	Isobutylene
1056	121	Krypton
1056	121	Krypton, compressed
1057	115	Cigarette lighter, with flammable gas
1057	115	Flammable gas in lighter for cigars, cigarettes, etc.
1057	115	Lighter refills (cigarettes) (flammable gas)
1057	115	Lighters (cigarettes) (flammable gas)
1058	121	Liquefied gas (nonflammable)
1058	121	Liquefied gases, non-flammable, charged with Nitrogen, Carbon dioxide or Air

**ID Guide Name of Material  
No. No.**

1060	116P	Methylacetylene and Propadiene mixture, stabilized
1060	116P	Propadiene and Methylacetylene mixture, stabilized
1061	118	Methylamine, anhydrous
1062	123	Methyl bromide
1063	115	Methyl chloride
1063	115	Refrigerant gas R-40
1064	117	Methyl mercaptan
1065	121	Neon
1065	121	Neon, compressed
1066	121	Nitrogen
1066	121	Nitrogen, compressed
1067	124	Dinitrogen tetroxide
1067	124	Dinitrogen tetroxide, liquefied
1067	124	Nitrogen dioxide
1067	124	Nitrogen dioxide, liquefied
1067	124	Nitrogen peroxide, liquid
1067	124	Nitrogen tetroxide, liquid
1069	125	Nitrosyl chloride
1070	122	Nitrous oxide
1070	122	Nitrous oxide, compressed
1071	119	Oil gas
1071	119	Oil gas, compressed
1072	122	Oxygen
1072	122	Oxygen, compressed
1073	122	Oxygen, refrigerated liquid (cryogenic liquid)
1075	115	Butane
1075	115	Butane mixture
1075	115	Butylene
1075	115	Isobutane

**ID Guide Name of Material  
No. No.**

1075 115 Isobutane mixture  
1075 115 Isobutylene  
1075 115 Liquefied petroleum gas  
1075 115 LPG  
1075 115 Petroleum gases, liquefied  
1075 115 Propane  
1075 115 Propane mixture  
1075 115 Propylene  
1076 125 CG  
1076 125 Diphosgene  
1076 125 DP  
1076 125 Phosgene  
1077 115 Propylene  
1078 126 Dispersant gas, n.o.s.  
1078 126 Refrigerant gas, n.o.s.  
1079 125 Sulfur dioxide  
1079 125 Sulfur dioxide, liquefied  
1079 125 Sulphur dioxide  
1079 125 Sulphur dioxide, liquefied  
1080 126 Sulfur hexafluoride  
1080 126 Sulphur hexafluoride  
1081 116P Tetrafluoroethylene, inhibited  
1082 119P Trifluorochloroethylene  
1082 119P Trifluorochloroethylene,  
inhibited  
1083 118 Trimethylamine, anhydrous  
1085 116P Vinyl bromide, inhibited  
1086 116P Vinyl chloride  
1086 116P Vinyl chloride, inhibited  
1086 116P Vinyl chloride, stabilized  
1087 116P Vinyl methyl ether  
1087 116P Vinyl methyl ether, inhibited  
1088 127 Acetal

**ID Guide Name of Material  
No. No.**

1089 129 Acetaldehyde  
1090 127 Acetone  
1091 127 Acetone oils  
1092 131P Acrolein, inhibited  
1093 131P Acrylonitrile, inhibited  
1098 131 Allyl alcohol  
1099 131 Allyl bromide  
1100 131 Allyl chloride  
1104 129 Amyl acetates  
1105 129 Amyl alcohols  
1105 129 Pentanols  
1106 132 Amylamines  
1107 129 Amyl chloride  
1108 127 n-Amylene  
1108 127 1-Pentene  
1109 129 Amyl formates  
1110 127 n-Amyl methyl ketone  
1110 127 Amyl methyl ketone  
1110 127 Methyl amyl ketone  
1111 130 Amyl mercaptan  
1112 140 Amyl nitrate  
1113 129 Amyl nitrite  
1114 130 Benzene  
1118 130 Brake fluid, hydraulic  
1120 129 Butanols  
1120 129 Butyl alcohol  
1123 129 Butyl acetates  
1125 132 n-Butylamine  
1126 129 1-Bromobutane  
1126 129 n-Butyl bromide  
1127 130 Butyl chloride  
1127 130 Chlorobutanes  
1128 129 n-Butyl formate

**ID Guide Name of Material  
No. No.**

1129 129 Butyraldehyde  
1130 128 Camphor oil  
1131 131 Carbon bisulfide  
1131 131 Carbon bisulphide  
1131 131 Carbon disulfide  
1131 131 Carbon disulphide  
1133 128 Adhesives (flammable)  
1133 128 Cement (flammable)  
1133 128 Cement, container, linoleum, tile  
or wallboard, liquid  
1133 128 Cement, leather  
1133 128 Cement, liquid, n.o.s.  
1133 128 Cement, pyroxylin  
1133 128 Cement, roofing, liquid  
1133 128 Cement, rubber  
1134 130 Chlorobenzene  
**1135 131 Ethylene chlorohydrin**  
1136 128 Coal tar distillates, flammable  
1137 128 Coal tar distillate  
1139 127 Coating solution  
1142 127 Compound, vulcanizing, liquid  
(flammable)  
1142 127 Compounds, polishing, liquid,  
etc. (flammable)  
1142 127 Flammable liquid preparations,  
n.o.s.  
**1143 131P Crotonaldehyde, inhibited**  
**1143 131P Crotonaldehyde, stabilized**  
1144 128 Crotonylene  
1145 128 Cyclohexane  
1146 128 Cyclopentane  
1147 130 Decahydronaphthalene  
1148 129 Diacetone alcohol  
1149 127 Butyl ethers

**ID Guide Name of Material  
No. No.**

1149 127 Dibutyl ethers  
1150 130P 1,2-Dichloroethylene  
1150 130P Dichloroethylene  
1152 130 Dichloropentanes  
1153 127 Ethylene glycol diethyl ether  
1154 132 Diethylamine  
1155 127 Diethyl ether  
1155 127 Ethyl ether  
1156 127 Diethyl ketone  
1157 127 Diisobutyl ketone  
1158 132 Diisopropylamine  
1159 127 Diisopropyl ether  
1160 129 Dimethylamine, aqueous  
solution  
1160 129 Dimethylamine, solution  
1161 129 Dimethyl carbonate  
**1162 155 Dimethyldichlorosilane**  
**1163 131 1,1-Dimethylhydrazine**  
**1163 131 Dimethylhydrazine,  
unsymmetrical**  
1164 130 Dimethyl sulfide  
1164 130 Dimethyl sulphide  
1165 127 Dioxane  
1166 127 Dioxolane  
1167 131P Divinyl ether, inhibited  
1168 127 Driers, paint or varnish, liquid,  
n.o.s.  
1169 127 Extracts, aromatic, liquid  
1170 127 Ethanol  
1170 127 Ethanol, solution  
1170 127 Ethyl alcohol  
1170 127 Ethyl alcohol, solution  
1171 127 Ethylene glycol monoethyl ether

ID No.	Guide No.	Name of Material	ID No.	Guide No.	Name of Material
1172	129	Ethylene glycol monoethyl ether acetate	1199	132P	Furaldehydes
1173	129	Ethyl acetate	1199	132P	Furfural
1175	129	Ethylbenzene	1199	132P	Furfuraldehydes
1176	129	Ethyl borate	1201	127	Fusel oil
1177	129	2-Ethylbutyl acetate	1202	128	Diesel fuel
1177	129	Ethylbutyl acetate	1202	128	Fuel oil
1178	129	2-Ethylbutyraldehyde	1202	128	Fuel oil, no. 1,2,4,5,6
1179	127	Ethyl butyl ether	1202	128	Gas oil
1180	129	Ethyl butyrate	1202	128	Heating oil, light
1181	155	Ethyl chloroacetate	1203	128	Gasohol
1182	155	Ethyl chloroformate	1203	128	Gasoline
1183	139	Ethyldichlorosilane	1203	128	Motor spirit
1184	129	Ethylene dichloride	1203	128	Petrol
1185	131P	Ethyleneimine, inhibited	1204	127	Nitroglycerin, solution in alcohol, with not more than 1% Nitroglycerin
1188	127	Ethylene glycol monomethyl ether	1204	127	Spirits of Nitroglycerin, not exceeding 1 % Nitroglycerin
1189	129	Ethylene glycol monomethyl ether acetate	1206	128	Heptanes
1190	129	Ethyl formate	1207	129	Hexaldehyde
1191	129	Ethylhexaldehydes	1208	128	Hexanes
1191	129	Octyl aldehydes	1208	128	Neohexane
1192	129	Ethyl lactate	1210	129	Ink, printer's, flammable
1193	127	Ethyl methyl ketone	1210	129	Printing ink, flammable
1193	127	Methyl ethyl ketone	1210	129	Printing ink related material
1194	131	Ethyl nitrite, solution	1212	129	Isobutanol
1195	129	Ethyl propionate	1212	129	Isobutyl alcohol
1196	155	Ethyltrichlorosilane	1213	129	Isobutyl acetate
1197	127	Extracts, flavoring, liquid	1214	132	Isobutylamine
1197	127	Extracts, flavouring, liquid	1216	128	Isooctene
1198	132	Formaldehyde, solution, flammable	1218	130P	Isoprene, inhibited
1198	132	Formaldehyde, solutions (Formalin)	1219	129	Isopropanol
			1219	129	Isopropyl alcohol



**ID Guide Name of Material  
No. No.**

1220 129 Isopropyl acetate  
1221 132 Isopropylamine  
1222 130 Isopropyl nitrate  
1223 128 Kerosene  
1224 127 Ketones, liquid, n.o.s.  
1226 127 Cigarette lighter, with flammable liquid  
1226 127 Lighters for cigars, cigarettes etc. with lighter fluid  
1226 127 Lighters for cigars, cigarettes (flammable liquid)  
1228 131 Mercaptan mixture, aliphatic  
1228 131 Mercaptan mixture, liquid, flammable, poisonous, n.o.s.  
1228 131 Mercaptan mixture, liquid, flammable, toxic, n.o.s.  
1228 131 Mercaptan mixtures, liquid, n.o.s.  
1228 131 Mercaptans, liquid, flammable, poisonous, n.o.s.  
1228 131 Mercaptans, liquid, flammable, toxic, n.o.s.  
1229 129 Mesityl oxide  
1230 131 Methanol  
1230 131 Methyl alcohol  
1231 129 Methyl acetate  
1232 127 Methyl acetone  
1233 129 Methylamyl acetate  
1234 127 Methylal  
1235 132 Methylamine, aqueous solution  
1237 129 Methyl butyrate  
1238 155 Methyl chloroformate  
1239 131 Methyl chloromethyl ether  
1242 139 Methylchlorosilane  
1243 129 Methyl formate

**ID Guide Name of Material  
No. No.**

1244 131 Methylhydrazine  
1245 127 Methyl isobutyl ketone  
1246 127P Methyl isopropenyl ketone, inhibited  
1247 129P Methyl methacrylate monomer, inhibited  
1247 129P Methyl methacrylate monomer, uninhibited  
1248 129 Methyl propionate  
1249 127 Methyl propyl ketone  
1250 155 Methyltrichlorosilane  
1251 131P Methyl vinyl ketone  
1251 131P Methyl vinyl ketone, stabilized  
1255 128 Naphtha, petroleum  
1255 128 Petroleum naphtha  
1256 128 Naphtha, solvent  
1257 128 Natural gasoline  
1259 131 Nickel carbonyl  
1261 129 Nitromethane  
1262 128 Isooctane  
1262 128 Octanes  
1263 128 Paint (flammable)  
1263 128 Paint related material (flammable)  
1264 129 Paraldehyde  
1265 128 Isopentane  
1265 128 n-Pentane  
1265 128 Pentanes  
1266 127 Perfumery products, with flammable solvents  
1267 128 Petroleum crude oil  
1268 128 Petroleum distillates, n.o.s.  
1268 128 Petroleum products, n.o.s.  
1270 128 Oil, petroleum, n.o.s.

**ID Guide Name of Material  
No. No.**

1270	128	Petroleum oil
1271	128	Petroleum ether
1271	128	Petroleum spirit
1272	129	Pine oil
1274	129	n-Propanol
1274	129	normal Propyl alcohol
1274	129	Propyl alcohol, normal
1275	129	Propionaldehyde
1276	129	n-Propyl acetate
1277	132	Monopropylamine
1277	132	Propylamine
1278	129	1-Chloropropane
1278	129	Propyl chloride
1279	130	1,2-Dichloropropane
1279	130	Dichloropropane
1279	130	Propylene dichloride
1280	127P	Propylene oxide
1281	129	Propyl formates
1282	129	Pyridine
1286	127	Rosin oil
1287	127	Rubber solution
1288	128	Shale oil
1289	132	Sodium methylate, alcohol mixture
1289	132	Sodium methylate, solution in alcohol
1292	132	Ethyl silicate
1292	132	Tetraethyl silicate
1293	127	Tinctures, medicinal
1294	130	Toluene
1295	139	Trichlorosilane
1296	132	Triethylamine
1297	132	Trimethylamine, aqueous solution

**ID Guide Name of Material  
No. No.**

1298	155	Trimethylchlorosilane
1299	128	Turpentine
1300	128	Turpentine substitute
1301	129P	Vinyl acetate
1301	129P	Vinyl acetate, inhibited
1302	127P	Vinyl ethyl ether
1302	127P	Vinyl ethyl ether, inhibited
1303	129P	Vinylidene chloride, inhibited
1304	127P	Vinyl isobutyl ether
1304	127P	Vinyl isobutyl ether, inhibited
1305	155	Vinyltrichlorosilane
1305	155	Vinyltrichlorosilane, inhibited
1306	129	Wood preservatives, liquid
1307	130	Xylenes
1308	170	Zirconium metal, liquid, suspension
1308	170	Zirconium suspended in a flammable liquid
1308	170	Zirconium suspended in a liquid (flammable)
1309	170	Aluminum powder, coated
1310	113	Ammonium picrate, wetted with not less than 10% water
1312	133	Borneol
1313	133	Calcium resinate
1314	133	Calcium resinate, fused
1318	133	Cobalt resinate, precipitated
1320	113	Dinitrophenol, wetted with not less than 15% water
1321	113	Dinitrophenolates, wetted with not less than 15% water
1322	113	Dinitroresorcinol, wetted with not less than 15% water
1323	170	Ferrocium
1324	133	Film

**ID Guide Name of Material  
No. No.**

1324 133 Films, nitrocellulose base  
 1325 133 Air bag inflators  
 1325 133 Air bag modules  
 1325 133 Antimony sulfide, solid  
 1325 133 Antimony sulphide, solid  
 1325 133 Burnt cotton, not picked  
 1325 133 Cosmetics, n.o.s.  
 1325 133 Drugs, n.o.s.  
 1325 133 Flammable solid, n.o.s.  
 1325 133 Flammable solid, organic, n.o.s.  
 1325 133 Fusee (rail or highway)  
 1325 133 Medicines, flammable, solid,  
 n.o.s.  
 1325 133 N-Methyl-N'-Nitro-N-  
 Nitrosoguanidine  
 1325 133 Pyroxylin plastic, rod, sheet,  
 roll, tube or scrap  
 1325 133 Smokeless powder for small  
 arms  
 1326 170 Hafnium powder, wetted with not  
 less than 25% water  
 1327 133 Bhusa, wet, damp or  
 contaminated with oil  
 1327 133 Hay, wet, damp or contaminated  
 with oil  
 1327 133 Straw, wet, damp or  
 contaminated with oil  
 1328 133 Hexamethylenetetramine  
 1328 133 Hexamine  
 1330 133 Manganese resinate  
 1331 133 Matches, "strike anywhere"  
 1332 133 Metaldehyde  
 1333 170 Cerium, slabs, ingots or rods  
 1334 133 Naphthalene, crude  
 1334 133 Naphthalene, refined

**ID Guide Name of Material  
No. No.**

1336 113 Nitroguanidine (Picrite), wetted  
 with not less than 20% water  
 1336 113 Nitroguanidine, wetted with not  
 less than 20% water  
 1336 113 Picrite, wetted  
 1337 113 Nitrostarch, wet, with not less  
 than 30% alcohol or solvent  
 1337 113 Nitrostarch, wetted with not less  
 than 20% water  
 1337 113 Nitrostarch, wetted with not less  
 than 30% solvent  
 1338 133 Phosphorus, amorphous  
 1338 133 Phosphorus, amorphous, red  
 1338 133 Red phosphorus  
 1338 133 Red phosphorus, amorphous  
 1339 139 Phosphorus heptasulfide, free  
 from yellow and white  
 Phosphorus  
 1339 139 Phosphorus heptasulphide, free  
 from yellow and white  
 Phosphorus  
 1340 139 Phosphorus pentasulfide, free  
 from yellow and white  
 Phosphorus  
 1340 139 Phosphorus pentasulphide, free  
 from yellow and white  
 Phosphorus  
 1341 139 Phosphorus sesquisulfide, free  
 from yellow and white  
 Phosphorus  
 1341 139 Phosphorus sesquisulphide,  
 free from yellow and white  
 Phosphorus  
 1343 139 Phosphorus trisulfide, free from  
 yellow and white Phosphorus  
 1343 139 Phosphorus trisulphide, free  
 from yellow and white  
 Phosphorus

**ID Guide Name of Material  
No. No.**

- 1344 113 Picric acid, wet, with not less than 10% water
- 1344 113 Trinitrophenol, wetted with not less than 30% water
- 1345 133 Rubber scrap, powdered or granulated
- 1345 133 Rubber shoddy, powdered or granulated
- 1346 170 Silicon powder, amorphous
- 1347 113 Silver picrate, wetted with not less than 30% water
- 1348 113 Sodium dinitro-o-cresolate, wetted with not less than 15% water
- 1348 113 Sodium dinitro-ortho-cresolate, wetted
- 1349 113 Sodium picramate, wetted with not less than 20% water
- 1350 133 Sulfur
- 1350 133 Sulphur
- 1352 170 Titanium powder, wetted with not less than 25% water
- 1353 133 Fabrics impregnated with weakly nitrated Nitrocellulose, n.o.s.
- 1353 133 Fibers impregnated with weakly nitrated Nitrocellulose, n.o.s.
- 1353 133 Fibres impregnated with weakly nitrated Nitrocellulose, n.o.s.
- 1353 133 Toe puffs, nitrocellulose base
- 1354 113 Trinitrobenzene, wetted with not less than 30% water
- 1355 113 Trinitrobenzoic acid, wetted with not less than 30% water
- 1356 113 TNT, wetted with not less than 30% water
- 1356 113 Trinitrotoluene, wetted with not less than 30% water

**ID Guide Name of Material  
No. No.**

- 1357 113 Urea nitrate, wetted with not less than 20% water
- 1358 170 Zirconium metal, powder, wet
- 1358 170 Zirconium powder, wetted with not less than 25% water
- 1360 139 Calcium phosphide**
- 1361 133 Carbon, animal or vegetable origin
- 1361 133 Charcoal
- 1361 133 Charcoal, briquettes
- 1361 133 Charcoal, shell
- 1361 133 Charcoal, wood, ground, crushed, granulated or pulverized
- 1361 133 Charcoal screenings, made from "Pinon" wood
- 1361 133 Charcoal screenings, other than "Pinon" wood screenings
- 1362 133 Carbon, activated
- 1363 135 Copra
- 1364 133 Cotton waste, oily
- 1365 133 Cotton
- 1365 133 Cotton, wet
- 1366 135 Diethylzinc
- 1369 135 p-Nitrosodimethylaniline
- 1370 135 Dimethylzinc
- 1372 133 Fiber, animal or vegetable, n.o.s., burnt, wet or damp
- 1372 133 Fibers
- 1373 133 Fabrics, animal, synthetic or vegetable, n.o.s., with oil
- 1373 133 Fiber, animal, synthetic or vegetable, n.o.s., with oil
- 1373 133 Fibres, animal, synthetic or vegetable, n.o.s., with oil
- 1374 133 Fish meal, unstabilized

**ID Guide Name of Material  
No. No.**

1374	133	Fish meal containing less than 6% or more than 12% water
1374	133	Fish scrap, unstabilized
1374	133	Fish scrap containing less than 6% or more than 12% water
1376	135	Iron oxide, spent
1376	135	Iron sponge, spent
1378	170	Metal catalyst, wetted
1379	133	Paper, unsaturated oil treated
1380	135	Pentaborane
1381	136	Phosphorus, white, dry or under water or in solution
1381	136	Phosphorus, yellow, dry or under water or in solution
1381	136	White phosphorus, dry
1381	136	White phosphorus, in solution
1381	136	White phosphorus, under water
1381	136	Yellow phosphorus, dry
1381	136	Yellow phosphorus, in solution
1381	136	Yellow phosphorus, under water
1382	135	Potassium sulfide, anhydrous
1382	135	Potassium sulfide, with less than 30% water of crystallization
1382	135	Potassium sulfide, with less than 30% water of hydration
1382	135	Potassium sulphide, anhydrous
1382	135	Potassium sulphide, with less than 30% water of crystallization
1382	135	Potassium sulphide, with less than 30% water of hydration
1383	135	Aluminum powder, pyrophoric
1383	135	Pyrophoric alloy, n.o.s.
1383	135	Pyrophoric metal, n.o.s.
1384	135	Sodium dithionite

**ID Guide Name of Material  
No. No.**

1384	135	Sodium hydrosulfite
1384	135	Sodium hydrosulphite
1385	135	Sodium sulfide, anhydrous
1385	135	Sodium sulfide, with less than 30% water of crystallization
1385	135	Sodium sulphide, anhydrous
1385	135	Sodium sulphide, with less than 30% water of crystallization
1386	135	Seed cake, with more than 1.5% oil and not more than 11% moisture
1389	138	Alkali metal amalgam
1389	138	Alkali metal amalgam, liquid
1389	138	Alkali metal amalgam, solid
1390	139	Alkali metal amides
1391	138	Alkali metal dispersion
1391	138	Alkaline earth metal dispersion
1392	138	Alkaline earth metal amalgam
1393	138	Alkaline earth metal alloy, n.o.s.
1394	138	Aluminum carbide
1395	139	Aluminum ferrosilicon powder
1396	138	Aluminum powder, uncoated
1397	139	Aluminum phosphide
1398	138	Aluminum silicon powder, uncoated
1400	138	Barium
1401	138	Calcium
1401	138	Calcium metal, crystalline
1402	138	Calcium carbide
1403	138	Calcium cyanamide, with more than 0.1% Calcium carbide
1404	138	Calcium hydride
1405	138	Calcium silicide
1406	138	Calcium silicon

**ID Guide Name of Material  
No. No.**

1407 138 Caesium  
1407 138 Cesium  
1408 139 Ferrosilicon  
1409 138 Hydrides, metal, n.o.s.  
1409 138 Metal hydrides, water-reactive,  
n.o.s.  
1410 138 Lithium aluminum hydride  
1411 138 Lithium aluminum hydride,  
ethereal  
1412 139 Lithium amide  
1413 138 Lithium borohydride  
1414 138 Lithium hydride  
1415 138 Lithium  
1417 138 Lithium silicon  
1418 138 Magnesium alloys powder  
1418 138 Magnesium powder  
1419 139 Magnesium aluminum phosphide  
1420 138 Potassium, metal alloys  
1420 138 Potassium, metal liquid alloy  
1421 138 Alkali metal alloy, liquid, n.o.s.  
1422 138 Potassium sodium alloys  
1422 138 Sodium potassium alloys  
1423 138 Rubidium  
1423 138 Rubidium metal  
1426 138 Sodium borohydride  
1427 138 Sodium hydride  
1428 138 Sodium  
1431 138 Sodium methylate  
1431 138 Sodium methylate, dry  
1432 139 Sodium phosphide  
1433 139 Stannic phosphides  
1435 138 Zinc ashes  
1435 138 Zinc dross

**ID Guide Name of Material  
No. No.**

1435 138 Zinc residue  
1435 138 Zinc skimmings  
1436 138 Zinc dust  
1436 138 Zinc powder  
1437 138 Zirconium hydride  
1438 140 Aluminum nitrate  
1439 141 Ammonium dichromate  
1442 143 Ammonium perchlorate  
1444 140 Ammonium persulfate  
1444 140 Ammonium persulphate  
1445 141 Barium chlorate  
1445 141 Barium chlorate, wet  
1446 141 Barium nitrate  
1447 141 Barium perchlorate  
1448 141 Barium permanganate  
1449 141 Barium peroxide  
1450 141 Bromates, inorganic, n.o.s.  
1451 140 Caesium nitrate  
1451 140 Cesium nitrate  
1452 140 Calcium chlorate  
1453 140 Calcium chlorite  
1454 140 Calcium nitrate  
1455 140 Calcium perchlorate  
1456 140 Calcium permanganate  
1457 140 Calcium peroxide  
1458 140 Borate and Chlorate mixtures  
1458 140 Chlorate and Borate mixtures  
1459 140 Chlorate and Magnesium  
chloride mixture  
1459 140 Magnesium chloride and  
Chlorate mixture  
1461 140 Chlorate, n.o.s., wet  
1461 140 Chlorates, inorganic, n.o.s.

**ID Guide Name of Material  
No. No.**

1462 143 Chlorites, inorganic, n.o.s.  
1463 141 Chromic acid, solid  
1463 141 Chromic acid mixture, dry  
1463 141 Chromium trioxide, anhydrous  
1465 140 Didymium nitrate  
1466 140 Ferric nitrate  
1467 143 Guanidine nitrate  
1469 141 Lead nitrate  
1470 141 Lead perchlorate  
1470 141 Lead perchlorate, solid  
1470 141 Lead perchlorate, solution  
1471 140 Lithium hypochlorite, dry  
1471 140 Lithium hypochlorite mixture  
1471 140 Lithium hypochlorite mixtures,  
dry  
1472 143 Lithium peroxide  
1473 140 Magnesium bromate  
1474 140 Magnesium nitrate  
1475 140 Magnesium perchlorate  
1476 140 Magnesium peroxide  
1477 140 Ammonium sulfate nitrate  
1477 140 Ammonium sulphate nitrate  
1477 140 Nitrate, n.o.s.  
1477 140 Nitrates, inorganic, n.o.s.  
1479 140 Compound, tree or weed killing,  
solid (oxidizer)  
1479 140 Cosmetics, n.o.s.  
1479 140 Drugs, n.o.s.  
1479 140 Medicines, oxidizing  
substances, solid, n.o.s.  
1479 140 Oxidizing solid, n.o.s.  
1479 140 Oxidizing substances, solid,  
n.o.s.  
1481 140 Perchlorate, n.o.s.

**ID Guide Name of Material  
No. No.**

1481 140 Perchlorates, inorganic, n.o.s.  
1482 140 Permanganate, n.o.s.  
1482 140 Permanganates, inorganic,  
n.o.s.  
1483 140 Peroxides, inorganic, n.o.s.  
1484 140 Potassium bromate  
1485 140 Potassium chlorate  
1486 140 Potassium nitrate  
1487 140 Potassium nitrate and Sodium  
nitrite mixture  
1487 140 Sodium nitrite and Potassium  
nitrate mixtures  
1487 140 Sodium nitrite mixture  
1488 140 Potassium nitrite  
1489 140 Potassium perchlorate  
1490 140 Potassium permanganate  
1491 144 Potassium peroxide  
1492 140 Potassium persulfate  
1492 140 Potassium persulphate  
1493 140 Silver nitrate  
1494 141 Sodium bromate  
1495 140 Sodium chlorate  
1496 143 Sodium chlorite  
1498 140 Sodium nitrate  
1499 140 Potassium nitrate and Sodium  
nitrate mixture  
1499 140 Sodium nitrate and Potassium  
nitrate mixture  
1500 140 Sodium nitrite  
1502 140 Sodium perchlorate  
1503 140 Sodium permanganate  
1504 144 Sodium peroxide  
1505 140 Sodium persulfate  
1505 140 Sodium persulphate

**ID Guide Name of Material**  
**No. No.**

1506 143 Strontium chlorate  
1506 143 Strontium chlorate, solid  
1506 143 Strontium chlorate, solution  
1507 140 Strontium nitrate  
1508 140 Strontium perchlorate  
1509 143 Strontium peroxide  
1510 143 Tetranitromethane  
1511 140 Urea hydrogen peroxide  
1511 140 Urea peroxide  
1512 140 Zinc ammonium nitrite  
1513 140 Zinc chlorate  
1514 140 Zinc nitrate  
1515 140 Zinc permanganate  
1516 143 Zinc peroxide  
1517 113 Zirconium picramate, wetted  
with not less than 20% water  
1541 155 Acetone cyanohydrin, stabilized  
1544 151 Alkaloids, solid, n.o.s.  
(poisonous)  
1544 151 Alkaloid salts, solid, n.o.s.  
(poisonous)  
1545 155 Allyl isothiocyanate, inhibited  
1545 155 Allyl isothiocyanate, stabilized  
1546 151 Ammonium arsenate  
1547 153 Aniline  
1548 153 Aniline hydrochloride  
1549 157 Antimony compound, inorganic,  
n.o.s.  
1549 157 Antimony compound, inorganic,  
solid, n.o.s.  
1549 157 Antimony tribromide, solid  
1549 157 Antimony tribromide, solution  
1549 157 Antimony trifluoride, solid  
1549 157 Antimony trifluoride, solution

**ID Guide Name of Material**  
**No. No.**

1550 151 Antimony lactate  
1551 151 Antimony potassium tartrate  
1553 154 Arsenic acid, liquid  
1554 154 Arsenic acid, solid  
1555 151 Arsenic bromide  
1556 152 Arsenic compound, liquid, n.o.s.  
1556 152 Arsenic compound, liquid,  
n.o.s., inorganic  
1556 152 MD  
1556 152 Methylchloroarsine  
1556 152 PD  
1556 152 Phenylchloroarsine  
1557 152 Arsenic compound, solid, n.o.s.  
1557 152 Arsenic compound, solid, n.o.s.,  
inorganic  
1557 152 Arsenic iodide, solid  
1557 152 Arsenic sulfide  
1557 152 Arsenic sulphide  
1557 152 Arsenic trisulfide  
1557 152 Arsenic trisulphide  
1558 152 Arsenic  
1559 151 Arsenic pentoxide  
1560 157 Arsenic chloride  
1560 157 Arsenic trichloride  
1561 151 Arsenic trioxide  
1562 152 Arsenical dust  
1564 154 Barium compound, n.o.s.  
1565 157 Barium cyanide  
1566 154 Beryllium chloride  
1566 154 Beryllium compound, n.o.s.  
1566 154 Beryllium fluoride  
1567 134 Beryllium powder  
1569 131 Bromoacetone



ID No.	Guide No.	Name of Material	ID No.	Guide No.	Name of Material
1570	152	Brucine	1585	151	Copper acetoarsenite
1571	113	Barium azide, wetted with not less than 50% water	1586	151	Copper arsenite
1572	151	Cacodylic acid	1587	151	Copper cyanide
1573	151	Calcium arsenate	1588	157	Cyanides, inorganic, n.o.s.
1574	151	Calcium arsenate and Calcium arsenite mixture, solid	1588	157	Cyanides, inorganic, solid, n.o.s.
1574	151	Calcium arsenite, solid	1589	125	CK
1574	151	Calcium arsenite and Calcium arsenate mixture, solid	1589	125	Cyanogen chloride, inhibited
1575	157	Calcium cyanide	1590	153	Dichloroanilines
1577	153	Chlorodinitrobenzenes	1590	153	Dichloroanilines, liquid
1577	153	Dinitrochlorobenzene	1590	153	Dichloroanilines, solid
1578	152	Chloronitrobenzenes	1591	152	o-Dichlorobenzene
1578	152	Chloronitrobenzenes, liquid	1592	152	p-Dichlorobenzene
1578	152	Chloronitrobenzenes, solid	1593	160	Dichloromethane
1578	152	Nitrochlorobenzenes, liquid	1593	160	Methylene chloride
1578	152	Nitrochlorobenzenes, solid	1594	152	Diethyl sulfate
1579	153	4-Chloro-o-toluidine hydrochloride	1594	152	Diethyl sulphate
1580	154	Chloropicrin	1595	156	Dimethyl sulfate
1581	123	Chloropicrin and Methyl bromide mixture	1595	156	Dimethyl sulphate
1581	123	Methyl bromide and Chloropicrin mixtures	1596	153	Dinitroanilines
1581	123	Methyl bromide and more than 2% Chloropicrin mixture, liquid	1597	152	Dinitrobenzenes
1582	119	Chloropicrin and Methyl chloride mixture	1598	153	Dinitro-o-cresol
1582	119	Methyl chloride and Chloropicrin mixtures	1599	153	Dinitrophenol, solution
1583	154	Chloropicrin, absorbed	1600	152	Dinitrotoluenes, molten
1583	154	Chloropicrin mixture, n.o.s.	1601	151	Disinfectant, solid, poisonous, n.o.s.
1584	151	Cocculus	1601	151	Disinfectant, solid, toxic, n.o.s.
			1601	151	Disinfectants, solid, n.o.s. (poisonous)
			1602	151	Dye, liquid, poisonous, n.o.s.
			1602	151	Dye, liquid, toxic, n.o.s.
			1602	151	Dye intermediate, liquid, poisonous, n.o.s.
			1602	151	Dye intermediate, liquid, toxic, n.o.s.

ID No.	Guide No.	Name of Material	ID No.	Guide No.	Name of Material
1603	155	Ethyl bromoacetate	1627	141	Mercurous nitrate
1604	132	Ethylenediamine	1628	151	Mercurous sulfate
1605	154	Ethylene dibromide	1628	151	Mercurous sulphate
1606	151	Ferric arsenate	1629	151	Mercury acetate
1607	151	Ferric arsenite	1630	151	Mercury ammonium chloride
1608	151	Ferrous arsenate	1631	154	Mercury benzoate
1610	159	Halogenated irritating liquid, n.o.s.	1633	151	Mercury bisulfate
1611	151	Hexaethyl tetraphosphate	1633	151	Mercury bisulphate
1611	151	Hexaethyl tetraphosphate, liquid	1634	154	Mercuric bromide
1611	151	Hexaethyl tetraphosphate, solid	1634	154	Mercurous bromide
1612	123	Hexaethyl tetraphosphate and compressed gas mixture	1634	154	Mercury bromides
1613	154	Hydrocyanic acid, aqueous solution, with less than 5% Hydrogen cyanide	1636	154	Mercuric cyanide
1613	154	Hydrocyanic acid, aqueous solution, with not more than 20% Hydrogen cyanide	1636	154	Mercury cyanide
1613	154	Hydrogen cyanide, aqueous solution, with not more than 20% Hydrogen cyanide	1637	151	Mercury gluconate
1614	131	Hydrogen cyanide, anhydrous, stabilized (absorbed)	1638	151	Mercury iodide
1614	131	Hydrogen cyanide, stabilized (absorbed)	1639	151	Mercury nucleate
1616	151	Lead acetate	1640	151	Mercury oleate
1617	151	Lead arsenates	1641	151	Mercury oxide
1618	151	Lead arsenites	1642	151	Mercuric oxycyanide
1620	151	Lead cyanide	1642	151	Mercury oxycyanide, desensitized
1621	151	London purple	1643	151	Mercury potassium iodide
1622	151	Magnesium arsenate	1644	151	Mercury salicylate
1623	151	Mercuric arsenate	1645	151	Mercuric sulfate
1624	154	Mercuric chloride	1645	151	Mercuric sulphate
1625	141	Mercuric nitrate	1645	151	Mercury sulfate
1626	157	Mercuric potassium cyanide	1645	151	Mercury sulphate
			1646	151	Mercury thiocyanate
			1647	151	Ethylene dibromide and Methyl bromide mixture, liquid
			1647	151	Methyl bromide and Ethylene dibromide mixture, liquid
			1648	131	Acetonitrile
			1648	131	Methyl cyanide

**ID Guide Name of Material**  
**No. No.**

1649 **131** Motor fuel anti-knock compound  
1649 **131** Motor fuel anti-knock mixture  
1649 **131** Tetraethyl lead, liquid  
1650 **153** beta-Naphthylamine  
1650 **153** Naphthylamine (beta)  
1651 **153** Naphthylthiourea  
1652 **153** Naphthylurea  
1653 **151** Nickel cyanide  
1654 **151** Nicotine  
1655 **151** Nicotine compound, solid, n.o.s.  
1655 **151** Nicotine preparation, solid, n.o.s.  
1656 **151** Nicotine hydrochloride  
1656 **151** Nicotine hydrochloride, solution  
1657 **151** Nicotine salicylate  
1658 **151** Nicotine sulfate, solid  
1658 **151** Nicotine sulfate, solution  
1658 **151** Nicotine sulphate, solid  
1658 **151** Nicotine sulphate, solution  
1659 **151** Nicotine tartrate  
1660 **124** Nitric oxide  
1660 **124** Nitric oxide, compressed  
1661 **153** Nitroanilines  
1662 **152** Nitrobenzene  
1663 **153** Nitrophenols  
1664 **152** Nitrotoluenes  
1664 **152** Nitrotoluenes, liquid  
1664 **152** Nitrotoluenes, solid  
1665 **152** Nitroxylens  
1665 **152** Nitroxylol  
1669 **151** Pentachloroethane  
1670 **157** Perchloromethyl mercaptan  
1671 **153** Phenol, solid  
1672 **151** Phenylcarbylamine chloride

**ID Guide Name of Material**  
**No. No.**

1673 **153** Phenylenediamines  
1674 **151** Phenylmercuric acetate  
1677 **151** Potassium arsenate  
1678 **154** Potassium arsenite  
1679 **157** Potassium cuprocyanide  
1680 **157** Potassium cyanide  
1683 **151** Silver arsenite  
1684 **151** Silver cyanide  
1685 **151** Sodium arsenate  
1686 **154** Sodium arsenite, aqueous  
solution  
1687 **153** Sodium azide  
1688 **152** Sodium cacodylate  
1689 **157** Sodium cyanide  
1690 **154** Sodium fluoride  
1690 **154** Sodium fluoride, solid  
1690 **154** Sodium fluoride, solution  
1691 **151** Strontium arsenite  
1692 **151** Strychnine  
1692 **151** Strychnine salts  
1693 **159** Irritating agent, n.o.s.  
1693 **159** ORM-A, n.o.s.  
1693 **159** Tear gas devices  
1693 **159** Tear gas substance, liquid, n.o.s.  
1693 **159** Tear gas substance, solid, n.o.s.  
1694 **159** Bromobenzyl cyanides  
1694 **159** CA  
1695 **131** Chloroacetone, stabilized  
1697 **153** Chloroacetophenone  
1697 **153** Chloroacetophenone, liquid  
1697 **153** Chloroacetophenone, solid  
1697 **153** CN  
1698 **154** Adamsite

**ID Guide Name of Material**  
**No. No.**

1698 154 Diphenylamine chloroarsine  
1698 154 DM  
1699 151 DA  
1699 151 Diphenylchloroarsine  
1699 151 Diphenylchloroarsine, liquid  
1699 151 Diphenylchloroarsine, solid  
1700 159 Tear gas candles  
1700 159 Tear gas grenades  
1701 152 Xylyl bromide  
1702 151 1,1,2,2-Tetrachloroethane  
1702 151 Tetrachloroethane  
1703 123 Tetraethyl dithiopyrophosphate  
and gases, in solution  
1703 123 Tetraethyl dithiopyrophosphate  
and gases, mixtures  
1703 123 Tetraethyl dithiopyrophosphate  
and gases, mixtures, or in  
solution (LC50 more than 200  
ppm but not more than 5000  
ppm)  
1703 123 Tetraethyl dithiopyrophosphate  
and gases, mixtures, or in  
solution (LC50 not more than  
200 ppm)  
1704 153 Tetraethyl dithiopyrophosphate  
1704 153 Tetraethyl dithiopyrophosphate,  
mixture, dry or liquid  
1705 123 Tetraethyl pyrophosphate and  
compressed gas mixtures  
1705 123 Tetraethyl pyrophosphate and  
compressed gas mixtures  
(LC50 more than 200 ppm but  
not more than 5000 ppm)  
1705 123 Tetraethyl pyrophosphate and  
compressed gas mixtures  
(LC50 not more than 200 ppm)  
1707 151 Thallium compound, n.o.s.

**ID Guide Name of Material**  
**No. No.**

1707 151 Thallium sulfate, solid  
1707 151 Thallium sulphate, solid  
1708 153 Toluidines  
1708 153 Toluidines, liquid  
1708 153 Toluidines, solid  
1709 151 2,4-Toluenediamine  
1709 151 Toluenediamine  
1709 151 2,4-Toluylenediamine  
1710 160 Trichloroethylene  
1711 153 Xylidines  
1712 151 Zinc arsenate  
1712 151 Zinc arsenate and Zinc arsenite  
mixture  
1712 151 Zinc arsenite  
1712 151 Zinc arsenite and Zinc arsenate  
mixture  
1713 151 Zinc cyanide  
1714 139 Zinc phosphide  
1715 137 Acetic anhydride  
1716 156 Acetyl bromide  
1717 132 Acetyl chloride  
1718 153 Acid butyl phosphate  
1718 153 Butyl acid phosphate  
1719 154 Alkaline liquid, n.o.s.  
1719 154 Caustic alkali liquid, n.o.s.  
1722 155 Allyl chlorocarbonate  
1722 155 Allyl chloroformate  
1723 132 Allyl iodide  
1724 155 Allyltrichlorosilane, stabilized  
1725 137 Aluminum bromide, anhydrous  
1726 137 Aluminum chloride, anhydrous  
1727 154 Ammonium bifluoride, solid  
1727 154 Ammonium hydrogendifluoride,  
solid

**ID Guide Name of Material  
No. No.**

1727	154	Ammonium hydrogen fluoride, solid
1728	155	Amyltrichlorosilane
1729	156	Anisoyl chloride
1730	157	Antimony pentachloride, liquid
1731	157	Antimony pentachloride, solution
1732	157	Antimony pentafluoride
1733	157	Antimony trichloride
1733	157	Antimony trichloride, liquid
1733	157	Antimony trichloride, solid
1733	157	Antimony trichloride, solution
1736	137	Benzoyl chloride
1737	156	Benzyl bromide
1738	156	Benzyl chloride
1739	137	Benzyl chloroformate
1740	154	Bifluorides, n.o.s.
1740	154	Hydrogendifluorides, n.o.s.
1741	125	Boron trichloride
1742	157	Boron trifluoride acetic acid complex
1743	157	Boron trifluoride propionic acid complex
1744	154	Bromine
1744	154	Bromine, solution
1745	144	Bromine pentafluoride
1746	144	Bromine trifluoride
1747	155	Butyltrichlorosilane
1748	140	Calcium hypochlorite, dry
1748	140	Calcium hypochlorite mixture, dry, with more than 39% available Chlorine (8.8% available Oxygen)
1749	124	Chlorine trifluoride
1750	153	Chloroacetic acid, liquid

**ID Guide Name of Material  
No. No.**

1750	153	Chloroacetic acid, solution
1751	153	Chloroacetic acid, solid
1752	156	Chloroacetyl chloride
1753	156	Chlorophenyltrichlorosilane
1754	137	Chlorosulfonic acid
1754	137	Chlorosulfonic acid and Sulfur trioxide mixture
1754	137	Chlorosulphonic acid
1754	137	Chlorosulphonic acid and Sulphur trioxide mixture
1754	137	Sulfur trioxide and Chlorosulfonic acid mixture
1754	137	Sulphur trioxide and Chlorosulphonic acid mixture
1755	154	Chromic acid, solution
1756	154	Chromic fluoride, solid
1757	154	Chromic fluoride, solution
1758	137	Chromium oxychloride
1759	154	Corrosive solid, n.o.s.
1759	154	Cosmetics, solid, n.o.s.
1759	154	Drugs, solid, n.o.s.
1759	154	Ferrous chloride, solid
1759	154	Medicines, corrosive, solid, n.o.s.
1759	154	Stannous chloride, solid
1760	154	Acid, liquid, n.o.s.
1760	154	Aluminum phosphate, solution
1760	154	Aluminum sulfate, solution
1760	154	Aluminum sulphate, solution
1760	154	2-(2-Aminoethoxy)ethanol
1760	154	Aminopropyldiethanolamine
1760	154	N-Aminopropylmorpholine
1760	154	Chemical kit
1760	154	Compound, rust preventing (corrosive)

**ID Guide Name of Material**  
**No. No.**

1760 154 Compound, rust removing  
(corrosive)  
1760 154 Compound, tree or weed killing,  
liquid (corrosive)  
1760 154 Compound, vulcanizing, liquid  
(corrosive)  
1760 154 Compounds, cleaning, liquid  
(corrosive)  
1760 154 Corrosive liquid, n.o.s.  
1760 154 Cosmetics, liquid, n.o.s.  
1760 154 2,2-Dichloropropionic acid  
1760 154 Drugs, liquid, n.o.s.  
1760 154 Ferrous chloride, solution  
1760 154 Flame retardant compound,  
liquid (corrosive)  
1760 154 Hexanoic acid  
1760 154 Isopentanoic acid  
1760 154 Medicines, corrosive, liquid, n.o.s.  
1760 154 Morpholine, aqueous mixture  
1760 154 Nitric acid, 40% or less  
1760 154 ORM-B, n.o.s.  
1760 154 Paint (corrosive)  
1760 154 Paint related material  
(corrosive)  
1760 154 Textile treating compound or  
mixture, liquid (corrosive)  
1760 154 Titanium sulfate, solution  
1760 154 Titanium sulphate, solution  
1761 154 Cupriethylenediamine, solution  
1762 156 Cyclohexenyltrichlorosilane  
1763 156 Cyclohexyltrichlorosilane  
1764 153 Dichloroacetic acid  
1765 156 Dichloroacetyl chloride  
1766 156 Dichlorophenyltrichlorosilane  
1767 155 Diethyldichlorosilane

**ID Guide Name of Material**  
**No. No.**

1768 154 Difluorophosphoric acid,  
anhydrous  
1769 156 Diphenyldichlorosilane  
1770 153 Diphenylmethyl bromide  
1771 156 Dodecyltrichlorosilane  
1773 157 Ferric chloride  
1773 157 Ferric chloride, anhydrous  
1774 154 Fire extinguisher charges,  
corrosive liquid  
1775 154 Fluoboric acid  
1775 154 Fluoroboric acid  
1776 154 Fluorophosphoric acid,  
anhydrous  
1777 137 Fluorosulfonic acid  
1777 137 Fluorosulphonic acid  
1778 154 Fluorosilicic acid  
1778 154 Fluosilicic acid  
1778 154 Hydrofluorosilicic acid  
1778 154 Hydrofluosilicic acid  
1779 153 Formic acid  
1780 156 Fumaryl chloride  
1781 156 Hexadecyltrichlorosilane  
1782 154 Hexafluorophosphoric acid  
1783 153 Hexamethylenediamine,  
solution  
1784 156 Hexyltrichlorosilane  
1786 157 Hydrofluoric acid and Sulfuric  
acid mixture  
1786 157 Hydrofluoric acid and Sulphuric  
acid mixture  
1786 157 Sulfuric acid and Hydrofluoric  
acid mixtures  
1786 157 Sulphuric acid and Hydrofluoric  
acid mixtures  
1787 154 Hydriodic acid

**ID Guide Name of Material  
No. No.**

1787	154	Hydriodic acid, solution
1788	154	Hydrobromic acid
1788	154	Hydrobromic acid, solution
1789	157	Compound, cleaning liquid (containing Hydrochloric (muriatic) acid)
1789	157	Hydrochloric acid
1789	157	Hydrochloric acid, mixture
1789	157	Hydrochloric acid, solution
1789	157	Muriatic acid
1790	157	Compound, cleaning liquid (containing Hydrofluoric acid)
1790	157	Etching acid, liquid, n.o.s.
1790	157	Hydrofluoric acid
1790	157	Hydrofluoric acid, solution
1791	154	Hypochlorite solution
1791	154	Hypochlorite solution, with more than 5% available Chlorine
1792	157	Iodine monochloride
1793	153	Isopropyl acid phosphate
1794	154	Lead sulfate, with more than 3% free acid
1794	154	Lead sulphate, with more than 3% free acid
1796	157	Nitrating acid mixture
1798	157	Aqua regia
1798	157	Nitrohydrochloric acid
1799	156	Nonyltrichlorosilane
1800	156	Octadecyltrichlorosilane
1801	156	Octyltrichlorosilane
1802	140	Perchloric acid, with not more than 50% acid
1803	153	Phenolsulfonic acid, liquid
1803	153	Phenolsulphonic acid, liquid
1804	156	Phenyltrichlorosilane

**ID Guide Name of Material  
No. No.**

1805	154	Phosphoric acid
1806	137	Phosphorus pentachloride
1807	137	Phosphoric anhydride
1807	137	Phosphorus pentoxide
1808	137	Phosphorus tribromide
1809	137	Phosphorus trichloride
1810	137	Phosphorus oxychloride
1811	154	Potassium bifluoride
1811	154	Potassium hydrogendifluoride
1811	154	Potassium hydrogen fluoride, solution
1812	154	Potassium fluoride
1813	154	Battery
1813	154	Caustic potash, dry, solid
1813	154	Potassium hydroxide, dry, solid
1813	154	Potassium hydroxide, flake
1813	154	Potassium hydroxide, solid
1814	154	Caustic potash, liquid
1814	154	Caustic potash, solution
1814	154	Potassium hydroxide, solution
1815	132	Propionyl chloride
1816	155	Propyltrichlorosilane
1817	137	Pyrosulfuryl chloride
1817	137	Pyrosulphuryl chloride
1818	157	Silicon tetrachloride
1819	154	Sodium aluminate, solution
1821	154	Sodium bisulfate, solid
1821	154	Sodium bisulphate, solid
1821	154	Sodium hydrogen sulfate, solid
1821	154	Sodium hydrogen sulphate, solid
1823	154	Caustic soda, bead
1823	154	Caustic soda, flake
1823	154	Caustic soda, granular

**ID Guide Name of Material**  
**No. No.**

1823 154 Caustic soda, solid  
1823 154 Sodium hydroxide, dry  
1823 154 Sodium hydroxide, bead  
1823 154 Sodium hydroxide, flake  
1823 154 Sodium hydroxide, granular  
1823 154 Sodium hydroxide, solid  
1824 154 Caustic soda, solution  
1824 154 Sodium hydroxide, solution  
1825 157 Sodium monoxide  
1826 157 Nitrating acid, spent  
1826 157 Nitrating acid mixture, spent  
1827 137 Stannic chloride, anhydrous  
1827 137 Tin tetrachloride  
1828 137 Sulfur chlorides  
1828 137 Sulphur chlorides  
1829 137 Sulfur trioxide  
1829 137 Sulfur trioxide, inhibited  
1829 137 Sulfur trioxide, stabilized  
1829 137 Sulfur trioxide, uninhibited  
1829 137 Sulphur trioxide  
1829 137 Sulphur trioxide, inhibited  
1829 137 Sulphur trioxide, stabilized  
1829 137 Sulphur trioxide, uninhibited  
1830 137 Sulfuric acid  
1830 137 Sulfuric acid, with more than  
51% acid  
1830 137 Sulphuric acid  
1830 137 Sulphuric acid, with more than  
51% acid  
1831 137 Oleum  
1831 137 Oleum, with less than 30% free  
Sulfur trioxide  
1831 137 Oleum, with less than 30% free  
Sulphur trioxide

**ID Guide Name of Material**  
**No. No.**

1831 137 Oleum, with not less than 30%  
free Sulfur trioxide  
1831 137 Oleum, with not less than 30%  
free Sulphur trioxide  
1831 137 Sulfuric acid, fuming  
1831 137 Sulfuric acid, fuming, with less  
than 30% free Sulfur trioxide  
1831 137 Sulfuric acid, fuming, with not  
less than 30% free Sulfur  
trioxide  
1831 137 Sulphuric acid, fuming  
1831 137 Sulphuric acid, fuming, with less  
than 30% free Sulphur trioxide  
1831 137 Sulphuric acid, fuming, with not  
less than 30% free Sulphur  
trioxide  
1832 137 Sulfuric acid, spent  
1832 137 Sulphuric acid, spent  
1833 154 Sulfurous acid  
1833 154 Sulphurous acid  
1834 137 Sulfuryl chloride  
1834 137 Sulphuryl chloride  
1835 153 Tetramethylammonium  
hydroxide  
1836 137 Thionyl chloride  
1837 157 Thiophosphoryl chloride  
1838 137 Titanium tetrachloride  
1839 153 Trichloroacetic acid  
1840 154 Zinc chloride, solution  
1841 171 Acetaldehyde ammonia  
1843 141 Ammonium dinitro-o-cresolate  
1845 120 Carbon dioxide, solid  
1845 120 Dry ice  
1846 151 Carbon tetrachloride



**ID Guide Name of Material  
No. No.**

1847 153 Potassium sulfide, hydrated,  
with not less than 30% water  
of crystallization

1847 153 Potassium sulfide, hydrated,  
with not less than 30% water  
of hydration

1847 153 Potassium sulphide, hydrated,  
with not less than 30% water  
of crystallization

1847 153 Potassium sulphide, hydrated,  
with not less than 30% water  
of hydration

1848 132 Propionic acid

1849 153 Sodium sulfide, hydrated, with  
not less than 30% water

1849 153 Sodium sulphide, hydrated, with  
not less than 30% water

1851 151 Medicine, liquid, poisonous, n.o.s.

1851 151 Medicine, liquid, toxic, n.o.s.

1854 135 Barium alloys, pyrophoric

1855 135 Calcium, metal and alloys,  
pyrophoric

1855 135 Calcium, pyrophoric

1855 135 Calcium alloys, pyrophoric

1856 133 Rags, oily

1858 126 Hexafluoropropylene

1858 126 Refrigerant gas R-1216

1859 125 Silicon tetrafluoride

1859 125 Silicon tetrafluoride,  
compressed

1860 116P Vinyl fluoride, inhibited

1862 129 Ethyl crotonate

1863 128 Fuel, aviation, turbine engine

1864 128 Gas drips, hydrocarbon

1865 131 n-Propyl nitrate

1866 127 Resin solution

**ID Guide Name of Material  
No. No.**

1867 133 Cigarettes, self-lighting

1868 134 Decaborane

1869 138 Magnesium

1869 138 Magnesium, in pellets, turnings  
or ribbons

1869 138 Magnesium alloys, with more  
than 50% Magnesium, in  
pellets, turnings or ribbons

1869 138 Magnesium scrap

1870 138 Potassium borohydride

1871 170 Titanium hydride

1872 141 Lead dioxide

1872 141 Lead peroxide

1873 143 Perchloric acid, with more than  
50% but not more than 72%  
acid

1884 157 Barium oxide

1885 153 Benzidine

1886 156 Benzylidene chloride

1887 160 Bromochloromethane

1888 151 Chloroform

1889 157 Cyanogen bromide

1891 131 Ethyl bromide

1892 151 ED

1892 151 Ethyldichloroarsine

1894 151 Phenylmercuric hydroxide

1895 151 Phenylmercuric nitrate

1897 160 Perchloroethylene

1897 160 Tetrachloroethylene

1898 156 Acetyl iodide

1902 153 Di-(2-ethylhexyl)phosphoric acid

1902 153 Diisooctyl acid phosphate

1903 153 Disinfectant, liquid, corrosive,  
n.o.s.

**ID No.    Gulde No.    Name of Material**

1903 153 Disinfectants, corrosive, liquid, n.o.s.  
1905 154 Selenic acid  
1906 153 Acid, sludge  
1906 153 Sludge acid  
1907 154 Soda lime, with more than 4% Sodium hydroxide  
1908 154 Chlorite solution  
1908 154 Chlorite solution, with more than 5% available Chlorine  
1908 154 Sodium chlorite, solution, with more than 5% available Chlorine  
1910 157 Calcium oxide  
1911 119 Diborane  
1911 119 Diborane, compressed  
1911 119 Diborane mixtures  
1912 115 Methyl chloride and Methylene chloride mixture  
1912 115 Methylene chloride and Methyl chloride mixture  
1913 120 Neon, refrigerated liquid (cryogenic liquid)  
1914 130 Butyl propionates  
1915 127 Cyclohexanone  
1916 152 2,2'-Dichlorodiethyl ether  
1916 152 Dichloroethyl ether  
1917 129P Ethyl acrylate, inhibited  
1918 130 Cumene  
1918 130 Isopropylbenzene  
1919 129P Methyl acrylate, inhibited  
1920 128 Nonanes  
1921 131P Propyleneimine, inhibited  
1922 132 Pyrrolidine  
1923 135 Calcium dithionite  
1923 135 Calcium hydrosulfite

**ID No.    Gulde No.    Name of Material**

1923 135 Calcium hydrosulphite  
1928 135 Methyl magnesium bromide in Ethyl ether  
1929 135 Potassium dithionite  
1929 135 Potassium hydrosulfite  
1929 135 Potassium hydrosulphite  
1931 171 Zinc dithionite  
1931 171 Zinc hydrosulfite  
1931 171 Zinc hydrosulphite  
1932 135 Zirconium scrap  
1935 157 Cyanide solution, n.o.s.  
1938 156 Bromoacetic acid  
1938 156 Bromoacetic acid, solid  
1938 156 Bromoacetic acid, solution  
1939 137 Phosphorus oxybromide  
1939 137 Phosphorus oxybromide, solid  
1940 153 Thioglycolic acid  
1941 171 Dibromodifluoromethane  
1942 140 Ammonium nitrate, with not more than 0.2% combustible substances  
1942 140 Ammonium nitrate, with organic coating  
1944 133 Matches, safety  
1945 133 Matches, wax "vesta"  
1950 126 Aerosol dispensers  
1950 126 Aerosols  
1951 120 Argon, refrigerated liquid (cryogenic liquid)  
1952 126 Carbon dioxide and Ethylene oxide mixtures, with not more than 6% Ethylene oxide  
1952 126 Carbon dioxide and Ethylene oxide mixtures, with not more than 9% Ethylene oxide

**ID Guide No. No. Name of Material**

- 1952 126 Ethylene oxide and Carbon dioxide mixtures, with not more than 6% Ethylene oxide
- 1952 126 Ethylene oxide and Carbon dioxide mixtures, with not more than 9% Ethylene oxide
- 1953 119 Compressed gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone A)
- 1953 119 Compressed gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone B)
- 1953 119 Compressed gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone C)
- 1953 119 Compressed gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone D)
- 1953 119 Compressed gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone A)
- 1953 119 Compressed gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone B)
- 1953 119 Compressed gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone C)
- 1953 119 Compressed gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone D)
- 1953 119 Compressed gas, poisonous, flammable, n.o.s.
- 1953 119 Compressed gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone A)
- 1953 119 Compressed gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone B)

**ID Guide No. No. Name of Material**

- 1953 119 Compressed gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone C)
- 1953 119 Compressed gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone D)
- 1953 119 Compressed gas, toxic, flammable, n.o.s.
- 1953 119 Compressed gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone A)
- 1953 119 Compressed gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone B)
- 1953 119 Compressed gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone C)
- 1953 119 Compressed gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone D)
- 1953 119 Liquefied gas, flammable, poisonous, n.o.s.
- 1953 119 Liquefied gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone A)
- 1953 119 Liquefied gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone B)
- 1953 119 Liquefied gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone C)
- 1953 119 Liquefied gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone D)
- 1953 119 Liquefied gas, flammable, toxic, n.o.s.
- 1953 119 Liquefied gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone A)

**ID Guide Name of Material  
No. No.**

1953	119	Liquefied gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone B)
1953	119	Liquefied gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone C)
1953	119	Liquefied gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone D)
1953	119	Poisonous gas, flammable, n.o.s.
1953	119	Poisonous liquid, flammable, n.o.s.
1954	115	Compressed gas, flammable, n.o.s.
1954	115	Dispersant gas, n.o.s. (flammable)
1954	115	Insecticide gas, flammable, n.o.s.
1954	115	Liquefied gas, flammable, n.o.s.
1954	115	Refrigerant gas, n.o.s. (flammable)
1954	115	Refrigerating machines, containing flammable, liquefied gas
1954	115	Refrigerating machines, containing flammable, non-poisonous, non-corrosive, liquefied gas
1955	123	Chloropicrin and non-flammable, non-liquefied compressed gas mixture
1955	123	Compressed gas, poisonous, n.o.s.
1955	123	Compressed gas, poisonous, n.o.s. (Inhalation Hazard Zone A)
1955	123	Compressed gas, poisonous, n.o.s. (Inhalation Hazard Zone B)
1955	123	Compressed gas, poisonous, n.o.s. (Inhalation Hazard Zone C)

**ID Guide Name of Material  
No. No.**

1955	123	Compressed gas, poisonous, n.o.s. (Inhalation Hazard Zone D)
1955	123	Compressed gas, toxic, n.o.s.
1955	123	Compressed gas, toxic, n.o.s. (Inhalation Hazard Zone A)
1955	123	Compressed gas, toxic, n.o.s. (Inhalation Hazard Zone B)
1955	123	Compressed gas, toxic, n.o.s. (Inhalation Hazard Zone C)
1955	123	Compressed gas, toxic, n.o.s. (Inhalation Hazard Zone D)
1955	123	Liquefied gas, poisonous, n.o.s.
1955	123	Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone A)
1955	123	Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone B)
1955	123	Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone C)
1955	123	Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone D)
1955	123	Liquefied gas, toxic, n.o.s.
1955	123	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone A)
1955	123	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone B)
1955	123	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone C)
1955	123	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone D)
1955	123	Methyl bromide and nonflammable, nonliquefied compressed gas mixture
1955	123	Organic phosphate compound mixed with compressed gas
1955	123	Organic phosphate mixed with compressed gas

**ID Guide Name of Material  
No. No.**

1955 123 Organic phosphorus compound mixed with compressed gas

1955 123 Poisonous gas, n.o.s.

1955 123 Poisonous liquid, n.o.s.

1956 126 Accumulators, pressurized, pneumatic or hydraulic

1956 126 Compressed gas, n.o.s.

1956 126 Hexafluoropropylene oxide

1956 126 Liquefied gas, n.o.s.

1956 126 Water pump system

1957 115 Deuterium

1957 115 Deuterium, compressed

1958 126 1,2-Dichloro-1,1,2,2-tetrafluoroethane

1958 126 Dichlorotetrafluoroethane

1958 126 Refrigerant gas R-114

1959 116P 1,1-Difluoroethylene

1959 116P Refrigerant gas R-1132a

1960 115 Engine starting fluid

1961 115 Ethane, refrigerated liquid

1961 115 Ethane-Propane mixture, refrigerated liquid

1961 115 Propane-Ethane mixture, refrigerated liquid

1962 116P Ethylene

1962 116P Ethylene, compressed

1963 120 Helium, refrigerated liquid (cryogenic liquid)

1964 115 Hydrocarbon gas, compressed, n.o.s.

1964 115 Hydrocarbon gas mixture, compressed, n.o.s.

1965 115 Hydrocarbon gas, liquefied, n.o.s.

1965 115 Hydrocarbon gas mixture, liquefied, n.o.s.

**ID Guide Name of Material  
No. No.**

1966 115 Hydrogen, refrigerated liquid (cryogenic liquid)

1967 123 Insecticide, liquefied gas, containing Poison A or Poison B material

1967 123 Insecticide gas, poisonous, n.o.s.

1967 123 Insecticide gas, toxic, n.o.s.

1967 123 Parathion and compressed gas mixture

1968 126 Insecticide, liquefied gas

1968 126 Insecticide gas, n.o.s.

1969 115 Isobutane

1969 115 Isobutane mixture

1970 120 Krypton, refrigerated liquid (cryogenic liquid)

1971 115 Methane

1971 115 Methane, compressed

1971 115 Natural gas, compressed

1972 115 Liquefied natural gas (cryogenic liquid)

1972 115 LNG (cryogenic liquid)

1972 115 Methane, refrigerated liquid (cryogenic liquid)

1972 115 Natural gas, refrigerated liquid (cryogenic liquid)

1973 126 Chlorodifluoromethane and Chloropentafluoroethane mixture

1973 126 Chloropentafluoroethane and Chlorodifluoromethane mixture

1973 126 Refrigerant gas R-502

1974 126 Bromochlorodifluoromethane

1974 126 Chlorodifluorobromomethane

1974 126 Refrigerant gas R-12B1

**ID Guide No. No. Name of Material**

1975	124	Dinitrogen tetroxide and Nitric oxide mixture
1975	124	Nitric oxide and Dinitrogen tetroxide mixture
1975	124	Nitric oxide and Nitrogen dioxide mixture
1975	124	Nitric oxide and Nitrogen tetroxide mixture
1975	124	Nitrogen dioxide and Nitric oxide mixture
1975	124	Nitrogen tetroxide and Nitric oxide mixture
1976	126	Octafluorocyclobutane
1976	126	Refrigerant gas RC-318
1977	120	Nitrogen, refrigerated liquid (cryogenic liquid)
1978	115	Propane
1978	115	Propane mixture
1979	121	Rare gases mixture
1979	121	Rare gases mixture, compressed
1980	122	Helium-Oxygen mixture
1980	122	Oxygen and Rare gases mixture
1980	122	Oxygen and Rare gases mixture, compressed
1980	122	Rare gases and Oxygen mixture
1980	122	Rare gases and Oxygen mixture, compressed
1981	121	Nitrogen and Rare gases mixture
1981	121	Nitrogen and Rare gases mixture, compressed
1981	121	Rare gases and Nitrogen mixture
1981	121	Rare gases and Nitrogen mixture, compressed
1982	126	Refrigerant gas R-14, compressed
1982	126	Tetrafluoromethane

**ID Guide No. No. Name of Material**

1982	126	Tetrafluoromethane, compressed
1983	126	1-Chloro-2,2,2-trifluoroethane
1983	126	Chlorotrifluoroethane
1983	126	Refrigerant gas R-133a
1984	126	Refrigerant gas R-23
1984	126	Trifluoromethane
1986	131	Alcohols, flammable, poisonous, n.o.s.
1986	131	Alcohols, flammable, toxic, n.o.s.
1986	131	Alcohols, poisonous, n.o.s.
1986	131	Alcohols, toxic, n.o.s.
1986	131	Denatured alcohol (toxic)
1986	131	Propargyl alcohol
1987	127	Alcohols, n.o.s.
1987	127	Denatured alcohol
1988	131	Aldehydes, flammable, poisonous, n.o.s.
1988	131	Aldehydes, flammable, toxic, n.o.s.
1988	131	Aldehydes, poisonous, n.o.s.
1988	131	Aldehydes, toxic, n.o.s.
1989	129	Aldehydes, n.o.s.
1989	129	Benzaldehyde
1990	129	Benzaldehyde
1991	131P	Chloroprene, inhibited
1992	131	Flammable liquid, poisonous, n.o.s.
1992	131	Flammable liquid, toxic, n.o.s.
1993	128	Combustible liquid, n.o.s.
1993	128	Compound, tree or weed killing, liquid (flammable)
1993	128	Compounds, cleaning, liquid (flammable)
1993	128	Cosmetics, n.o.s.

**ID Guide Name of Material  
No. No.**

1993 128 Diesel fuel  
 1993 128 Disinfectant, liquid, n.o.s.  
 1993 128 Drugs, n.o.s.  
 1993 128 Ethyl nitrate  
 1993 128 Flammable liquid, n.o.s.  
 1993 128 Fuel oil  
 1993 128 Heater for refrigerator car, liquid fuel type  
 1993 128 Medicines, flammable, liquid, n.o.s.  
 1993 128 Refrigerating machine  
 1994 131 Iron pentacarbonyl  
 1999 130 Asphalt  
 1999 130 Asphalt, cutback  
 1999 130 Tars, liquid  
 2000 133 Celluloid, in blocks, rods, rolls, sheets, tubes, etc., except scrap  
 2001 133 Cobalt naphthenates, powder  
 2002 135 Celluloid, scrap  
 2003 135 Metal alkyls, n.o.s.  
 2003 135 Metal alkyls, water-reactive, n.o.s.  
 2003 135 Metal aryls, n.o.s.  
 2003 135 Metal aryls, water-reactive, n.o.s.  
 2004 135 Magnesium diamide  
 2005 135 Magnesium diphenyl  
 2006 135 Plastic, nitrocellulose-based, spontaneously combustible, n.o.s.  
 2006 135 Plastics, nitrocellulose-based, self-heating, n.o.s.  
 2008 135 Zirconium powder, dry  
 2009 135 Zirconium, dry, finished sheets, strips or coiled wire

**ID Guide Name of Material  
No. No.**

2010 138 Magnesium hydride  
 2011 139 Magnesium phosphide  
 2012 139 Potassium phosphide  
 2013 139 Strontium phosphide  
 2014 140 Hydrogen peroxide, aqueous solution, with not less than 20% but not more than 60% Hydrogen peroxide (stabilized as necessary)  
 2015 143 Hydrogen peroxide, aqueous solution, stabilized, with more than 60% Hydrogen peroxide  
 2015 143 Hydrogen peroxide, stabilized  
 2016 151 Ammunition, poisonous, non-explosive  
 2016 151 Ammunition, toxic, non-explosive  
 2017 159 Ammunition, tear-producing, non-explosive  
 2017 159 Grenade, tear gas  
 2018 152 Chloroanilines, solid  
 2019 152 Chloroanilines, liquid  
 2020 153 Chlorophenols, solid  
 2020 153 Trichlorophenol  
 2021 153 Chlorophenols, liquid  
 2022 153 Cresylic acid  
 2022 153 Mining reagent, liquid  
 2023 131P 1-Chloro-2,3-epoxypropane  
 2023 131P Epichlorohydrin  
 2024 151 Mercury compound, liquid, n.o.s.  
 2025 151 Mercury compound, solid, n.o.s.  
 2026 151 Phenylmercuric compound, n.o.s.  
 2027 151 Sodium arsenite, solid  
 2028 153 Bombs, smoke, non-explosive, with corrosive liquid, without initiating device

**ID Guide Name of Material  
No. No.**

2029 132 Hydrazine, anhydrous  
 2029 132 Hydrazine, aqueous solutions,  
 with more than 64% Hydrazine  
 2030 153 Hydrazine, aqueous solution,  
 with not less than 37% but not  
 more than 64% Hydrazine  
 2030 153 Hydrazine, aqueous solutions,  
 with not more than 64%  
 Hydrazine  
 2030 153 Hydrazine hydrate  
 2031 157 Nitric acid, other than red fuming  
 2032 157 Nitric acid, fuming  
 2032 157 Nitric acid, red fuming  
 2033 154 Potassium monoxide  
 2034 115 Hydrogen and Methane mixture,  
 compressed  
 2034 115 Methane and Hydrogen mixture,  
 compressed  
 2035 115 Refrigerant gas R-143a  
 2035 115 1,1,1-Trifluoroethane  
 2035 115 Trifluoroethane, compressed  
 2036 121 Xenon  
 2036 121 Xenon, compressed  
 2037 115 Gas cartridges  
 2037 115 Receptacles, small, containing  
 gas  
 2038 152 Dinitrotoluenes  
 2038 152 Dinitrotoluenes, liquid  
 2038 152 Dinitrotoluenes, solid  
 2044 115 2,2-Dimethylpropane  
 2045 129 Isobutyl aldehyde  
 2045 129 Isobutyraldehyde  
 2046 130 Cymenes  
 2047 132 Dichloropropenes  
 2048 129 Dicyclopentadiene

**ID Guide Name of Material  
No. No.**

2049 130 Diethylbenzene  
 2050 127 Diisobutylene, isomeric  
 compounds  
 2051 132 2-Dimethylaminoethanol  
 2051 132 Dimethylethanolamine  
 2052 128 Dipentene  
 2053 129 Methylamyl alcohol  
 2053 129 Methyl isobutyl carbinol  
 2053 129 M.I.B.C.  
 2054 132 Morpholine  
 2054 132 Morpholine, aqueous mixture  
 2055 128P Styrene monomer, inhibited  
 2056 127 Tetrahydrofuran  
 2057 128 Tripropylene  
 2058 129 Valeraldehyde  
 2059 127 Collodion  
 2059 127 Nitrocellulose, block, wet, with  
 not less than 25% alcohol  
 2059 127 Nitrocellulose, colloidied,  
 granular or flake, wet, with not  
 less than 20% alcohol or  
 solvent  
 2059 127 Nitrocellulose, solution,  
 flammable  
 2059 127 Nitrocellulose, solution, in a  
 flammable liquid  
 2067 140 Ammonium nitrate fertilizers  
 2068 140 Ammonium nitrate fertilizers,  
 with Calcium carbonate  
 2069 140 Ammonium nitrate fertilizers,  
 with Ammonium sulfate  
 2069 140 Ammonium nitrate fertilizers,  
 with Ammonium sulphate  
 2069 140 Ammonium nitrate mixed  
 fertilizers



**ID Guide Name of Material  
No. No.**

2070 **143** Ammonium nitrate fertilizers, with Phosphate or Potash

2071 **140** Ammonium nitrate fertilizer, with not more than 0.4% combustible material

2071 **140** Ammonium nitrate fertilizers

2072 **140** Ammonium nitrate fertilizer, n.o.s.

2072 **140** Ammonium nitrate fertilizers

2073 **125** Ammonia, solution, with more than 35% but not more than 50% Ammonia

2074 **153P** Acrylamide

2075 **153** Chloral, anhydrous, inhibited

2076 **153** Cresols

2077 **153** alpha-Naphthylamine

2077 **153** Naphthylamine (alpha)

2078 **156** Toluene diisocyanate

2079 **154** Diethylenetriamine

2080 **145** Acetyl acetone peroxide

2081 **147** Acetyl benzoyl peroxide

2082 **148** Acetyl cyclohexanesulfonyl peroxide

2082 **148** Acetyl cyclohexanesulphonyl peroxide

2083 **148** Acetyl cyclohexanesulfonyl peroxide

2083 **148** Acetyl cyclohexanesulphonyl peroxide

2084 **148** Acetyl peroxide

2085 **146** Benzoyl peroxide

2087 **146** Benzoyl peroxide

2088 **146** Benzoyl peroxide

2089 **145** Benzoyl peroxide

2090 **146** Benzoyl peroxide

2091 **145** tert-Butyl cumene peroxide

**ID Guide Name of Material  
No. No.**

2091 **145** tert-Butyl cumyl peroxide

2091 **145** tert-Butyl isopropyl benzene hydroperoxide

2092 **147** tert-Butyl hydroperoxide, not more than 80% in Di-tert-butyl peroxide and/or solvent

2093 **147** tert-Butyl hydroperoxide

2094 **147** tert-Butyl hydroperoxide

2095 **146** tert-Butyl peroxyacetate

2096 **146** tert-Butyl peroxyacetate

2097 **146** tert-Butyl peroxybenzoate

2098 **145** tert-Butyl peroxybenzoate

2099 **146** tert-Butyl monoperoxymaleate

2102 **145** Di-tert-butyl peroxide

2103 **146** tert-Butyl peroxyisopropyl carbonate

2104 **145** tert-Butyl peroxyisononanoate

2104 **145** tert-Butyl peroxy-3,5,5-trimethylhexanoate

2106 **146** Di-(tert-butylperoxy)phthalate

2107 **145** Di-(tert-butylperoxy)phthalate

2108 **145** Di-(tert-butylperoxy)phthalate

2110 **148** tert-Butyl peroxy-pivalate

2111 **146** 2,2-Di-(tert-butylperoxy)butane

2112 **145** 1,3-Di-(2-tert-butylperoxy-isopropyl)benzene and 1,4-Di-(2-tert-butylperoxy-isopropyl)benzene mixtures

2112 **145** 1,4-Di-(2-tert-butylperoxy-isopropyl)benzene and 1,3-Di-(2-tert-butylperoxy-isopropyl)benzene mixtures

2113 **146** p-Chlorobenzoyl peroxide

2114 **145** p-Chlorobenzoyl peroxide

2115 **145** p-Chlorobenzoyl peroxide

2116 **147** Cumene hydroperoxide

**ID No. Guide No. Name of Material**

2118	147	Cyclohexanone peroxide, not more than 72% in solution
2119	147	Cyclohexanone peroxide, not more than 90%, with not less than 10% water
2120	148	Decanoyl peroxide
2121	145	Dicumyl peroxide
2122	148	Di-(2-ethylhexyl)-peroxydicarbonate
2123	148	Di-(2-ethylhexyl)-peroxydicarbonate
2124	145	Lauroyl peroxide
2125	147	p-Menthane hydroperoxide
2126	147	Methyl isobutyl ketone peroxide
2128	148	Isononanoyl peroxide
2129	148	Caprylyl peroxide
2129	148	Caprylyl peroxide, solution
2129	148	Octanoyl peroxide
2130	148	Pelargonyl peroxide
2131	147	Peracetic acid, solution
2131	147	Peroxyacetic acid, solution
2132	148	Propionyl peroxide
2133	148	Isopropyl percarbonate, unstabilized
2133	148	Isopropyl peroxydicarbonate
2134	148	Isopropyl peroxydicarbonate
2135	146	Succinic acid peroxide
2136	145	Tetralin hydroperoxide
2137	146	2,4-Dichlorobenzoyl peroxide
2138	145	2,4-Dichlorobenzoyl peroxide
2139	145	2,4-Dichlorobenzoyl peroxide
2140	146	n-Butyl-4,4-di-(tert-butylperoxy)valerate
2141	145	n-Butyl-4,4-di-(tert-butylperoxy)valerate

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2142	148	tert-Butyl peroxyisobutyrate
2143	148	tert-Butyl peroxy-2-ethylhexanoate
2144	148	tert-Butyl peroxydiethylacetate
2145	146	1,1-Di-(tert-butylperoxy)-3,3,5-trimethyl cyclohexane
2146	145	1,1-Di-(tert-butylperoxy)-3,3,5-trimethyl cyclohexane
2147	145	1,1-Di-(tert-butylperoxy)-3,3,5-trimethyl cyclohexane
2148	145	Di-(1-hydroxycyclohexyl)-peroxide
2149	148	Dibenzyl peroxydicarbonate
2150	148	Di-(sec-butyl)peroxydicarbonate
2151	148	Di-(sec-butyl)peroxydicarbonate
2152	148	Dicyclohexyl peroxydicarbonate
2153	148	Dicyclohexyl peroxydicarbonate
2154	148	Di-(4-tert-butylcyclohexyl)-peroxydicarbonate
2155	145	2,5-Dimethyl-2,5-di-(tert-butylperoxy)hexane
2156	145	2,5-Dimethyl-2,5-di-(tert-butylperoxy)hexane
2157	148	2,5-Dimethyl-2,5-di-(2-ethylhexanoylperoxy)hexane
2158	146	2,5-Dimethyl-2,5-di-(tert-butylperoxy)hexyne-3
2159	145	2,5-Dimethyl-2,5-di-(tert-butylperoxy)hexyne-3, with not more than 52% Peroxide in inert solid
2160	145	1,1,3,3-Tetramethylbutyl hydroperoxide
2161	148	1,1,3,3-Tetramethylbutyl peroxy-2-ethylhexanoate
2162	147	Pinane hydroperoxide
2163	148	Diacetone alcohol peroxides

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No. No.**

2164	148	Dicetyl peroxydicarbonate
2165	146	3,3,6,6,9,9-Hexamethyl-1,2,4,5-tetraoxacyclononane
2166	145	3,3,6,6,9,9-Hexamethyl-1,2,4,5-tetraoxacyclononane
2167	145	3,3,6,6,9,9-Hexamethyl-1,2,4,5-tetraoxacyclononane
2168	145	2,2-Di-(4,4-di-tert-butylperoxycyclohexyl)propane
2169	148	Butyl peroxydicarbonate
2170	148	Butyl peroxydicarbonate
2171	145	Diisopropylbenzene hydroperoxide
2172	146	2,5-Dimethyl-2,5-di-(benzoylperoxy)hexane
2173	145	2,5-Dimethyl-2,5-di-(benzoylperoxy)hexane
2174	146	2,5-Dimethyl-2,5-dihydroperoxy hexane, not more than 82% with water
2174	146	Dimethylhexane dihydroperoxide, with 18% or more water
2175	148	Diethyl peroxydicarbonate
2176	148	Di-n-propyl peroxydicarbonate
2177	148	tert-Butyl peroxyneodecanoate
2178	146	2,2-Dihydroperoxypropane
2179	146	1,1-Di-(tert-butylperoxy)-cyclohexane
2180	146	1,1-Di-(tert-butylperoxy)-cyclohexane
2182	148	Diisobutyl peroxide
2183	145	tert-Butyl peroxyacrylate
2184	146	Ethyl-3,3-di-(tert-butylperoxy)butyrate
2185	145	Ethyl-3,3-di-(tert-butylperoxy)butyrate, not more than 77% in solution

**ID Guide Name of Material  
No. No.**

2186	125	Hydrogen chloride, refrigerated liquid
2187	120	Carbon dioxide, refrigerated liquid
2188	119	Arsine
2188	119	SA
2189	119	Dichlorosilane
2190	124	Oxygen difluoride
2190	124	Oxygen difluoride, compressed
2191	123	Sulfuryl fluoride
2191	123	Sulphuryl fluoride
2192	119	Germane
2193	126	Hexafluoroethane
2193	126	Hexafluoroethane, compressed
2193	126	Refrigerant gas R-116, compressed
2194	125	Selenium hexafluoride
2195	125	Tellurium hexafluoride
2196	125	Tungsten hexafluoride
2197	125	Hydrogen iodide, anhydrous
2198	125	Phosphorus pentafluoride
2198	125	Phosphorus pentafluoride, compressed
2199	119	Phosphine
2200	116P	Propadiene, inhibited
2201	122	Nitrous oxide, refrigerated liquid
2202	117	Hydrogen selenide, anhydrous
2203	116	Silane
2203	116	Silane, compressed
2204	119	Carbonyl sulfide
2204	119	Carbonyl sulphide
2205	153	Adiponitrile
2206	155	Isocyanate solution, poisonous, n.o.s.

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2206 155 Isocyanate solution, toxic, n.o.s.  
2206 155 Isocyanate solutions, n.o.s.  
2206 155 Isocyanates, n.o.s.  
2206 155 Isocyanates, poisonous, n.o.s.  
2206 155 Isocyanates, toxic, n.o.s.  
2207 155 Isocyanate solutions, n.o.s.  
(toxic)  
2207 155 Isocyanates, n.o.s. (toxic)  
2208 140 Bleaching powder  
2208 140 Calcium hypochlorite mixture,  
dry, with more than 10% but  
not more than 39% available  
Chlorine  
2209 132 Formaldehyde, solutions  
(Formalin) (corrosive)  
2210 135 Maneb  
2210 135 Maneb preparation, with not less  
than 60% Maneb  
2210 135 Pesticide, water-reactive  
2211 133 Polymeric beads, expandable  
2211 133 Polystyrene beads, expandable  
2212 171 Asbestos  
2212 171 Asbestos, blue  
2212 171 Asbestos, brown  
2212 171 Blue asbestos  
2212 171 Brown asbestos  
2213 133 Paraformaldehyde  
2214 156 Phthalic anhydride  
2215 156 Maleic acid  
2215 156 Maleic anhydride  
2216 171 Fish meal, stabilized  
2216 171 Fish meal containing 6% to 12%  
water  
2216 171 Fish scrap, stabilized

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No. No.**

2216 171 Fish scrap containing 6% to 12%  
water  
2217 135 Seed cake, with not more than  
1.5% oil and not more than  
11% moisture  
2218 132P Acrylic acid, inhibited  
2219 129 Allyl glycidyl ether  
2222 127 Anisole  
2224 152 Benzonitrile  
2225 156 Benzenesulfonyl chloride  
2225 156 Benzenesulphonyl chloride  
2226 156 Benzotrichloride  
2227 129P n-Butyl methacrylate  
2227 129P n-Butyl methacrylate, inhibited  
2228 153 Butylphenols, liquid  
2229 153 Butylphenols, solid  
2232 153 Chloroacetaldehyde  
2232 153 2-Chloroethanal  
2233 152 Chloroanisidines  
2234 130 Chlorobenzotrifluorides  
2235 153 Chlorobenzyl chlorides  
2236 156 3-Chloro-4-methylphenyl  
isocyanate  
2237 153 Chloronitroanilines  
2238 130 Chlorotoluenes  
2239 153 Chlorotoluidines  
2239 153 Chlorotoluidines, liquid  
2239 153 Chlorotoluidines, solid  
2240 154 Chromosulfuric acid  
2240 154 Chromosulphuric acid  
2241 128 Cycloheptane  
2242 128 Cycloheptene  
2243 130 Cyclohexyl acetate  
2244 129 Cyclopentanol

ID No.	Guide No.	Name of Material	ID No.	Guide No.	Name of Material
2245	127	Cyclopentanone	2267	156	Dimethyl phosphorochloridothioate
2246	128	Cyclopentene	2267	156	Dimethyl thiophosphoryl chloride
2247	128	n-Decane	2269	153	3,3'-Iminodipropylamine
2248	132	Di-n-butylamine	2270	132	Ethylamine, aqueous solution, with not less than 50% but not more than 70% Ethylamine
2249	153	Dichlorodimethyl ether, symmetrical	2271	127	Ethyl amyl ketone
2250	156	Dichlorophenyl isocyanates	2272	153	N-Ethylaniline
2251	127P	Bicyclo[2.2.1]hepta-2,5-diene	2273	153	2-Ethylaniline
2251	127P	Bicyclo[2.2.1]hepta-2,5-diene, inhibited	2274	153	N-Ethyl-N-benzylaniline
2251	127P	Dicycloheptadiene	2275	129	2-Ethylbutanol
2251	127P	2,5-Norbornadiene	2276	132	2-Ethylhexylamine
2251	127P	2,5-Norbornadiene, inhibited	2277	129P	Ethyl methacrylate
2252	127	1,2-Dimethoxyethane	2277	129P	Ethyl methacrylate, inhibited
2253	153	N,N-Dimethylaniline	2278	128	n-Heptene
2254	133	Matches, fusee	2279	151	Hexachlorobutadiene
2255	146	Organic peroxides, samples, n.o.s	2280	153	Hexamethylenediamine, solid
2255	146	Polyester resin kit	2281	156	Hexamethylene diisocyanate
2256	130	Cyclohexene	2282	129	Hexanols
2257	138	Potassium	2283	130P	Isobutyl methacrylate
2257	138	Potassium, metal	2283	130P	Isobutyl methacrylate, inhibited
2258	132	1,2-Propylenediamine	2284	131	Isobutyronitrile
2258	132	1,3-Propylenediamine	2285	156	Isocyanatobenzotrifluorides
2259	153	Triethylenetetramine	2286	128	Pentamethylheptane
2260	132	Tripropylamine	2287	128	Isoheptene
2261	153	Xylenols	2288	128	Isohexene
2262	156	Dimethylcarbamoyl chloride	2289	153	Isophoronediamine
2263	128	Dimethylcyclohexanes	2290	156	IPDI
2264	132	Dimethylcyclohexylamine	2290	156	Isophorone diisocyanate
2265	129	N,N-Dimethylformamide	2291	151	Lead chloride
2266	132	Dimethyl-N-propylamine	2291	151	Lead compound, soluble, n.o.s.
2267	156	Dimethyl chlorothiophosphate	2291	151	Lead fluoborate

**ID Guide Name of Material**  
**No. No.**

2293 127 4-Methoxy-4-methyl-  
pentan-2-one  
2294 153 N-Methylaniline  
2295 155 Methyl chloroacetate  
2296 128 Methylcyclohexane  
2297 127 Methylcyclohexanone  
2298 128 Methylcyclopentane  
2299 155 Methyl dichloroacetate  
2300 153 2-Methyl-5-ethylpyridine  
2301 127 2-Methylfuran  
2302 127 5-Methylhexan-2-one  
2303 128 Isopropenylbenzene  
2304 133 Naphthalene, molten  
2305 153 Nitrobenzenesulfonic acid  
2305 153 Nitrobenzenesulphonic acid  
2306 152 Nitrobenzotrifluorides  
2307 152 3-Nitro-4-chlorobenzotrifluoride  
2308 157 Nitrosylsulfuric acid  
2308 157 Nitrosylsulphuric acid  
2309 128P Octadiene  
2310 131 Pentan-2,4-dione  
2310 131 2,4-Pentanedione  
2310 131 Pentane-2,4-dione  
2311 153 Phenetidines  
2312 153 Phenol, molten  
2313 130 Picolines  
2315 171 Articles containing Polychlorinated  
biphenyls (PCB)  
2315 171 PCB  
2315 171 Polychlorinated biphenyls  
2315 171 Polychlorinated biphenyls, liquid  
2315 171 Polychlorinated biphenyls, solid  
2316 157 Sodium cuprocyanide, solid  
2317 157 Sodium cuprocyanide, solution

**ID Guide Name of Material**  
**No. No.**

2318 135 Sodium hydrosulfide, solid,  
with less than 25% water of  
crystallization  
2318 135 Sodium hydrosulfide, with less  
than 25% water of  
crystallization  
2318 135 Sodium hydrosulphide, solid,  
with less than 25% water of  
crystallization  
2318 135 Sodium hydrosulphide, with less  
than 25% water of  
crystallization  
2319 128 Terpene hydrocarbons, n.o.s.  
2320 153 Tetraethylenepentamine  
2321 153 Trichlorobenzenes, liquid  
2322 152 Trichlorobutene  
2323 129 Triethyl phosphite  
2324 128 Triisobutylene  
2325 129 1,3,5-Trimethylbenzene  
2326 153 Trimethylcyclohexylamine  
2327 153 Trimethylhexamethylenediamines  
2328 156 Trimethylhexamethylene  
diisocyanate  
2329 129 Trimethyl phosphite  
2330 128 Undecane  
2331 154 Zinc chloride, anhydrous  
2332 129 Acetaldehyde oxime  
2333 131 Allyl acetate  
2334 131 Allylamine  
2335 131 Allyl ethyl ether  
2336 131 Allyl formate  
2337 131 Phenyl mercaptan  
2338 131 Benzotrifluoride  
2339 130 2-Bromobutane  
2340 130 2-Bromoethyl ethyl ether

**ID Guide Name of Material**  
**No. No.**

2341 130 1-Bromo-3-methylbutane  
2342 130 Bromomethylpropanes  
2343 130 2-Bromopentane  
2344 130 2-Bromopropane  
2344 130 Bromopropanes  
2345 129 3-Bromopropyne  
2346 127 Butanedione  
2346 127 Diacetyl  
2347 130 Butyl mercaptan  
2348 129P Butyl acrylate  
2348 129P Butyl acrylates, inhibited  
2350 127 Butyl methyl ether  
2351 129 Butyl nitrites  
2352 127P Butyl vinyl ether, inhibited  
2353 132 Butyryl chloride  
2354 131 Chloromethyl ethyl ether  
2356 129 2-Chloropropane  
2357 132 Cyclohexylamine  
2358 128P Cyclooctatetraene  
2359 132 Diallylamine  
2360 131P Diallyl ether  
2361 132 Diisobutylamine  
2362 130 1,1-Dichloroethane  
2363 130 Ethyl mercaptan  
2364 127 n-Propyl benzene  
2366 127 Diethyl carbonate  
2367 130 alpha-Methylvaleraldehyde  
2367 130 Methyl valeraldehyde (alpha)  
2368 127 alpha-Pinene  
2368 127 Pinene (alpha)  
2369 152 Ethylene glycol monobutyl ether  
2370 128 1-Hexene  
2371 128 Isopentenes

**ID Guide Name of Material**  
**No. No.**

2372 129 1,2-Di-(dimethylamino)ethane  
2373 127 Diethoxymethane  
2374 127 3,3-Diethoxypropene  
2375 129 Diethyl sulfide  
2375 129 Diethyl sulphide  
2376 127 2,3-Dihydropyran  
2377 127 1,1-Dimethoxyethane  
2378 131 2-Dimethylaminoacetonitrile  
2379 132 1,3-Dimethylbutylamine  
2380 127 Dimethyldiethoxysilane  
2381 130 Dimethyl disulfide  
2381 130 Dimethyl disulphide  
2382 131 1,2-Dimethylhydrazine  
2382 131 Dimethylhydrazine, symmetrical  
2383 132 Dipropylamine  
2384 127 Di-n-propyl ether  
2384 127 Dipropyl ether  
2385- 129 Ethyl isobutyrate  
2386 132 1-Ethylpiperidine  
2387 130 Fluorobenzene  
2388 130 Fluorotoluenes  
2389 127 Furan  
2390 129 2-Iodobutane  
2391 129 Iodomethylpropanes  
2392 129 Iodopropanes  
2393 132 Isobutyl formate  
2394 129 Isobutyl propionate  
2395 132 Isobutyryl chloride  
2396 131P Methacrylaldehyde  
2396 131P Methacrylaldehyde, inhibited  
2397 127 3-Methylbutan-2-one  
2398 127 Methyl tert-butyl ether  
2399 132 1-Methylpiperidine

**ID Guide Name of Material**  
**No. No.**

2400 130 Methyl isovalerate  
2401 132 Piperidine  
2402 130 Isopropyl mercaptan  
2402 130 Propanethiols  
2402 130 Propyl mercaptan  
2403 129P Isopropenyl acetate  
2404 131 Propionitrile  
2405 129 Isopropyl butyrate  
2406 131 Isopropyl isobutyrate  
2407 155 Isopropyl chloroformate  
2409 129 Isopropyl propionate  
2410 129 1,2,3,6-Tetrahydropyridine  
2410 129 1,2,5,6-Tetrahydropyridine  
2411 131 Butyronitrile  
2412 129 Tetrahydrothiophene  
2413 128 Tetrapropyl orthotitanate  
2414 130 Thiophene  
2416 129 Trimethyl borate  
2417 125 Carbonyl fluoride  
2417 125 Carbonyl fluoride, compressed  
2418 125 Sulfur tetrafluoride  
2418 125 Sulphur tetrafluoride  
2419 116 Bromotrifluoroethylene  
2420 125 Hexafluoroacetone  
2421 124 Nitrogen trioxide  
2422 126 Octafluorobut-2-ene  
2422 126 Refrigerant gas R-1318  
2424 126 Octafluoropropane  
2424 126 Refrigerant gas R-218  
2426 140 Ammonium nitrate, liquid (hot concentrated solution)  
2427 140 Potassium chlorate, aqueous solution

**ID Guide Name of Material**  
**No. No.**

2427 140 Potassium chlorate, solution  
2428 140 Sodium chlorate, aqueous solution  
2429 140 Calcium chlorate, aqueous solution  
2429 140 Calcium chlorate, solution  
2430 153 Alkyl phenols, solid, n.o.s. (including C2-C12 homologues)  
2431 153 Anisidines  
2431 153 Anisidines, liquid  
2431 153 Anisidines, solid  
2432 153 N,N-Diethylaniline  
2433 152 Chloronitrotoluenes  
2433 152 Chloronitrotoluenes, liquid  
2433 152 Chloronitrotoluenes, solid  
2434 156 Dibenzylchlorosilane  
2435 156 Ethylphenylchlorosilane  
2436 129 Thioacetic acid  
2437 156 Methylphenylchlorosilane  
2438 132 Trimethylacetyl chloride  
2439 154 Sodium bifluoride, solid  
2439 154 Sodium bifluoride, solution  
2439 154 Sodium hydrogendifluoride  
2439 154 Sodium hydrogen fluoride  
2440 154 Stannic chloride, pentahydrate  
2440 154 Tin tetrachloride, pentahydrate  
2441 135 Titanium trichloride, pyrophoric  
2441 135 Titanium trichloride mixture, pyrophoric  
2442 156 Trichloroacetyl chloride  
2443 137 Titanium tetrachloride and Vanadium oxytrichloride, mixture  
2443 137 Vanadium oxytrichloride



**ID Guide Name of Material  
No. No.**

2443	137	Vanadium oxytrichloride and Titanium tetrachloride, mixture
2444	137	Vanadium tetrachloride
2445	135	Lithium alkyls
2446	153	Nitrocresols
2447	136	Phosphorus, white, molten
2447	136	White phosphorus, molten
2447	136	Yellow phosphorus, molten
2448	133	Sulfur, molten
2448	133	Sulphur, molten
2449	154	Ammonium oxalate
2449	154	Oxalates, water soluble
2451	122	Nitrogen trifluoride
2451	122	Nitrogen trifluoride, compressed
2452	116P	Ethylacetylene, inhibited
2453	115	Ethyl fluoride
2453	115	Refrigerant gas R-161
2454	115	Methyl fluoride
2454	115	Refrigerant gas R-41
2455	116	Methyl nitrite
2456	130P	2-Chloropropene
2457	128	2,3-Dimethylbutane
2458	130	Hexadiene
2459	127	2-Methyl-1-butene
2460	127	2-Methyl-2-butene
2461	127	Methylpentadiene
2462	128	Methyl pentane
2463	138	Aluminum hydride
2464	141	Beryllium nitrate
2465	140	Dichloroisocyanuric acid, dry
2465	140	Dichloroisocyanuric acid salts
2465	140	Potassium dichloro-s-triazinetrione, dry

**ID Guide Name of Material  
No. No.**

2465	140	Sodium dichloroisocyanurate
2465	140	Sodium dichloro-s-triazinetrione
2466	143	Potassium superoxide
2467	140	Sodium percarbonates
2468	140	Trichloroisocyanuric acid, dry
2468	140	Trichloro-s-triazinetrione, dry
2468	140	(mono)-(Trichloro)-tetra-(monopotassium dichloro)-penta-s-triazinetrione, dry
2469	140	Zinc bromate
2470	152	Phenylacetoneitrile, liquid
2471	154	Osmium tetroxide
2473	154	Sodium arsanilate
2474	157	Thiophosgene
2475	157	Vanadium trichloride
2477	131	Methyl isothiocyanate
2478	155	Isocyanate solution, flammable, poisonous, n.o.s.
2478	155	Isocyanate solution, flammable, toxic, n.o.s.
2478	155	Isocyanate solutions, n.o.s.
2478	155	Isocyanates, flammable, poisonous, n.o.s.
2478	155	Isocyanates, flammable, toxic, n.o.s.
2478	155	Isocyanates, n.o.s.
2480	155	Methyl isocyanate
2481	155	Ethyl isocyanate
2482	155	n-Propyl isocyanate
2483	155	Isopropyl isocyanate
2484	155	tert-Butyl isocyanate
2485	155	n-Butyl isocyanate
2486	155	Isobutyl isocyanate
2487	155	Phenyl isocyanate

ID No.	Guide No.	Name of Material	ID No.	Guide No.	Name of Material
2488	155	Cyclohexyl isocyanate	2514	129	Bromobenzene
2489	156	Diphenylmethane-4,4'-diisocyanate	2515	159	Bromoform
2490	153	Dichloroisopropyl ether	2516	151	Carbon tetrabromide
2491	153	Ethanolamine	2517	115	1-Chloro-1,1-difluoroethane
2491	153	Ethanolamine, solution	2517	115	Chlorodifluoroethanes
2491	153	Monoethanolamine	2517	115	Difluorochloroethanes
2493	132	Hexamethyleneimine	2517	115	Refrigerant gas R-142b
2495	144	Iodine pentafluoride	2518	153	1,5,9-Cyclododecatriene
2496	156	Propionic anhydride	2520	130P	Cyclooctadienes
2497	153	Sodium phenolate, solid	2521	131P	Diketene, inhibited
2498	132	1,2,3,6-Tetrahydrobenzaldehyde	2522	153P	2-Dimethylaminoethyl methacrylate
2501	152	1-Aziridinyl phosphine oxide (Tris)	2522	153P	Dimethylaminoethyl methacrylate
2501	152	Tri-(1-aziridinyl)phosphine oxide, solution	2524	129	Ethyl orthoformate
2501	152	Tris-(1-aziridinyl)phosphine oxide, solution	2525	156	Ethyl oxalate
2502	132	Valeryl chloride	2526	132	Furfurylamine
2503	137	Zirconium tetrachloride	2527	130P	Isobutyl acrylate
2504	159	Acetylene tetrabromide	2527	130P	Isobutyl acrylate, inhibited
2504	159	Tetrabromoethane	2528	129	Isobutyl isobutyrate
2505	154	Ammonium fluoride	2529	132	Isobutyric acid
2506	154	Ammonium hydrogen sulfate	2530	132	Isobutyric anhydride
2506	154	Ammonium hydrogen sulphate	2531	153P	Methacrylic acid, inhibited
2507	154	Chloroplatinic acid, solid	2533	156	Methyl trichloroacetate
2508	156	Molybdenum pentachloride	2534	119	Methylchlorosilane
2509	154	Potassium hydrogen sulfate	2535	132	4-Methylmorpholine
2509	154	Potassium hydrogen sulphate	2535	132	N-Methylmorpholine
2511	153	2-Chloropropionic acid	2535	132	Methylmorpholine
2511	153	alpha-Chloropropionic acid	2536	127	Methyltetrahydrofuran
2512	152	Aminophenols	2538	133	Nitronaphthalene
2513	156	Bromoacetyl bromide	2541	128	Terpinolene
			2542	153	Tributylamine
			2545	135	Hafnium powder, dry

**ID Guide Name of Material  
No. No.**

2546	135	Titanium powder, dry
2547	143	Sodium superoxide
2548	124	Chlorine pentafluoride
2550	147	Methyl ethyl ketone peroxide
2551	145	tert-Butyl peroxydiethylacetate, with tert-Butyl peroxybenzoate
2552	151	Hexafluoroacetone hydrate
2553	128	Naphtha
2554	129P	Methylallyl chloride
2555	113	Nitrocellulose, colloided, granular or flake, wet, with not less than 20% water
2555	113	Nitrocellulose with water, not less than 25% water
2556	113	Nitrocellulose, wet, with not less than 30% alcohol or solvent
2556	113	Nitrocellulose with alcohol
2556	113	Nitrocellulose with not less than 25% alcohol
2557	133	Lacquer chips, dry
2557	133	Nitrocellulose mixture, without plasticizer, without pigment
2557	133	Nitrocellulose mixture, without plasticizer, with pigment
2557	133	Nitrocellulose mixture, with plasticizer, without pigment
2557	133	Nitrocellulose mixture, with plasticizer, with pigment
2557	133	Nitrocellulose with plasticizing substance
2558	131	Epibromohydrin
2560	129	2-Methylpentan-2-ol
2561	127	3-Methyl-1-butene
2562	148	tert-Butyl peroxyisobutyrate
2564	153	Trichloroacetic acid, solution

**ID Guide Name of Material  
No. No.**

2565	153	Dicyclohexylamine
2567	154	Sodium pentachlorophenate
2570	154	Cadmium compound
2571	156	Alkylsulfuric acids
2571	156	Alkylsulphuric acids
2571	156	Ethylsulfuric acid
2571	156	Ethylsulphuric acid
2572	153	Phenylhydrazine
2573	141	Thallium chlorate
2574	151	Tricresyl phosphate
2576	137	Phosphorus oxybromide, molten
2577	156	Phenylacetyl chloride
2578	157	Phosphorus trioxide
2579	153	Piperazine
2580	154	Aluminum bromide, solution
2581	154	Aluminum chloride, solution
2582	154	Ferric chloride, solution
2583	153	Alkyl sulfonic acids, solid, with more than 5% free Sulfuric acid
2583	153	Alkyl sulphonic acids, solid, with more than 5% free Sulphuric acid
2583	153	Aryl sulfonic acids, solid, with more than 5% free Sulfuric acid
2583	153	Aryl sulphonic acids, solid, with more than 5% free Sulphuric acid
2583	153	Toluene sulfonic acid, solid, with more than 5% free Sulfuric acid
2583	153	Toluene sulphonic acid, solid, with more than 5% free Sulphuric acid

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2584	153	Alkyl sulfonic acids, liquid, with more than 5% free Sulfuric acid
2584	153	Alkyl sulphonic acids, liquid, with more than 5% free Sulphuric acid
2584	153	Aryl sulfonic acids, liquid, with more than 5% free Sulfuric acid
2584	153	Aryl sulphonic acids, liquid, with more than 5% free Sulphuric acid
2584	153	Dodecylbenzenesulfonic acid
2584	153	Dodecylbenzenesulphonic acid
2584	153	Toluene sulfonic acid, liquid, with more than 5% free Sulfuric acid
2584	153	Toluene sulphonic acid, liquid, with more than 5% free Sulphuric acid
2585	153	Alkyl sulfonic acids, solid, with not more than 5% free Sulfuric acid
2585	153	Alkyl sulphonic acids, solid, with not more than 5% free Sulphuric acid
2585	153	Aryl sulfonic acids, solid, with not more than 5% free Sulfuric acid
2585	153	Aryl sulphonic acids, solid, with not more than 5% free Sulphuric acid
2585	153	Toluene sulfonic acid, solid, with not more than 5% free Sulfuric acid
2585	153	Toluene sulphonic acid, solid, with not more than 5% free Sulphuric acid
2586	153	Alkyl sulfonic acids, liquid, with not more than 5% free Sulfuric acid

**ID Guide Name of Material  
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2586	153	Alkyl sulphonic acids, liquid, with not more than 5% free Sulphuric acid
2586	153	Aryl sulfonic acids, liquid, with not more than 5% free Sulfuric acid
2586	153	Aryl sulphonic acids, liquid, with not more than 5% free Sulphuric acid
2586	153	Toluene sulfonic acid, liquid, with not more than 5% free Sulfuric acid
2586	153	Toluene sulphonic acid, liquid, with not more than 5% free Sulphuric acid
2587	153	Benzoquinone
2588	151	Insecticide, dry, n.o.s.
2588	151	Pesticide, solid, poisonous
2588	151	Pesticide, solid, poisonous, n.o.s.
2588	151	Pesticide, solid, toxic, n.o.s.
2589	155	Vinyl chloroacetate
2590	171	Asbestos, white
2590	171	White asbestos
2591	120	Xenon, refrigerated liquid (cryogenic liquid)
2592	145	Distearyl peroxydicarbonate
2593	148	Di-(2-methylbenzoyl)peroxide
2594	148	tert-Butyl peroxyneodecanoate
2595	148	Dimyristyl peroxydicarbonate
2596	145	tert-Butyl peroxy-3-phenylphthalide
2597	148	Di-(3,5,5-trimethyl-1,2-dioxolanyl-3)peroxide
2598	145	Ethyl-3,3-di-(tert-butylperoxy)butyrate

**ID Guide Name of Material**  
**No. No.**

2599 126 Chlorotrifluoromethane and Trifluoromethane azeotropic mixture with approximately 60% Chlorotrifluoromethane

2599 126 Refrigerant gas R-13 and Refrigerant gas R-23 azeotropic mixture with 60% Refrigerant gas R-13

2599 126 Refrigerant gas R-23 and Refrigerant gas R-13 azeotropic mixture with 60% Refrigerant gas R-13

2599 126 Refrigerant gas R-503 (azeotropic mixture of Refrigerant gas R-13 and Refrigerant gas R-23 with approximately 60% Refrigerant gas R-13)

2599 126 Trifluoromethane and Chlorotrifluoromethane azeotropic mixture with approximately 60% Chlorotrifluoromethane

2600 119 Carbon monoxide and Hydrogen mixture

2600 119 Carbon monoxide and Hydrogen mixture, compressed

2600 119 Hydrogen and Carbon monoxide mixture

2600 119 Hydrogen and Carbon monoxide mixture, compressed

2601 115 Cyclobutane

2602 126 Dichlorodifluoromethane and Difluoroethane azeotropic mixture with approximately 74% Dichlorodifluoromethane

2602 126 Difluoroethane and Dichlorodifluoromethane azeotropic mixture with approximately 74% dichlorodifluoromethane

**ID Guide Name of Material**  
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2602 126 Refrigerant gas R-12 and Refrigerant gas R-152a azeotropic mixture with 74% Refrigerant gas R-12

2602 126 Refrigerant gas R-152a and Refrigerant gas R-12 azeotropic mixture with 74% Refrigerant gas R-12

2602 126 Refrigerant gas R-500 (azeotropic mixture of Refrigerant gas R-12 and Refrigerant gas R-152a with approximately 74% Refrigerant gas R-12)

2603 131 Cycloheptatriene

2604 132 Boron trifluoride diethyl etherate

2605 155 Methoxymethyl isocyanate

2606 155 Methyl orthosilicate

2607 129P Acrolein dimer, stabilized

2608 129 Nitropropanes

2609 156 Triallyl borate

2610 132 Triallylamine

2611 131 Propylene chlorohydrin

2612 127 Methyl propyl ether

2614 129 Methallyl alcohol

2615 127 Ethyl propyl ether

2616 129 Triisopropyl borate

2617 129 Methylcyclohexanols

2618 130P Vinyltoluenes, inhibited

2619 132 Benzyldimethylamine

2620 130 Amyl butyrates

2621 127 Acetyl methyl carbinol

2622 131P Glycidaldehyde

2623 133 Firelighters, solid, with flammable liquid

2624 138 Magnesium silicide

**ID No. Guide No. Name of Material**

2626 140 Chloric acid  
2626 140 Chloric acid, aqueous solution,  
with not more than 10%  
Chloric acid  
2627 140 Nitrites, inorganic, n.o.s.  
2628 151 Potassium fluoroacetate  
2629 151 Sodium fluoroacetate  
2630 151 Barium selenate  
2630 151 Barium selenite  
2630 151 Calcium selenate  
2630 151 Potassium selenate  
2630 151 Potassium selenite  
2630 151 Selenates  
2630 151 Selenites  
2630 151 Sodium selenite  
2630 151 Zinc selenate  
2630 151 Zinc selenite  
2642 154 Fluoroacetic acid  
2643 155 Methyl bromoacetate  
2644 151 Methyl iodide  
2645 153 Phenacyl bromide  
2646 151 Hexachlorocyclopentadiene  
2647 153 Malononitrile  
2648 154 1,2-Dibromobutan-3-one  
2649 153 1,3-Dichloroacetone  
2650 153 1,1-Dichloro-1-nitroethane  
2651 153 4,4'-Diaminodiphenylmethane  
2653 156 Benzyl iodide  
2655 151 Potassium fluorosilicate  
2655 151 Potassium silicofluoride  
2656 154 Quinoline  
2657 153 Selenium disulfide  
2657 153 Selenium disulphide

**ID No. Guide No. Name of Material**

2658 152 Selenium powder  
2659 151 Sodium chloroacetate  
2660 153 Mononitrotoluidines  
2660 153 Nitrotoluidines (mono)  
2661 153 Hexachloroacetone  
2662 153 Hydroquinone  
2664 160 Dibromomethane  
2666 156 Ethyl cyanoacetate  
2667 131 Butyltoluenes  
2668 131 Chloroacetonitrile  
2669 152 Chlorocresols  
2669 152 Chlorocresols, liquid  
2669 152 Chlorocresols, solid  
2670 157 Cyanuric chloride  
2671 153 Aminopyridines  
2672 154 Ammonia, solution, with more  
than 10% but not more than  
35% Ammonia  
2672 154 Ammonium hydroxide  
2672 154 Ammonium hydroxide, with more  
than 10% but not more than  
35% Ammonia  
2673 151 2-Amino-4-chlorophenol  
2674 154 Sodium fluorosilicate  
2674 154 Sodium silicofluoride  
2676 119 Stibine  
2677 154 Rubidium hydroxide, solution  
2678 154 Rubidium hydroxide  
2678 154 Rubidium hydroxide, solid  
2679 154 Lithium hydroxide, solution  
2680 154 Lithium hydroxide, monohydrate  
2680 154 Lithium hydroxide, solid  
2681 154 Caesium hydroxide, solution  
2681 154 Cesium hydroxide, solution

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2682 157 Caesium hydroxide  
2682 157 Cesium hydroxide  
2683 132 Ammonium hydrosulfide,  
solution  
2683 132 Ammonium hydrosulphide,  
solution  
2683 132 Ammonium sulfide, solution  
2683 132 Ammonium sulphide, solution  
2684 132 3-Diethylaminopropylamine  
2684 132 Diethylaminopropylamine  
2685 132 N,N-Diethylethylenediamine  
2686 132 2-Diethylaminoethanol  
2686 132 Diethylaminoethanol  
2687 133 Dicyclohexylammonium nitrite  
2688 159 1-Bromo-3-chloropropane  
2688 159 1-Chloro-3-bromopropane  
2689 153 Glycerol alpha-  
monochlorohydrin  
2690 152 N,n-Butylimidazole  
2691 137 Phosphorus pentabromide  
2692 157 Boron tribromide  
2693 154 Ammonium bisulfite, solid  
2693 154 Ammonium bisulfite, solution  
2693 154 Ammonium bisulphite, solid  
2693 154 Ammonium bisulphite, solution  
2693 154 Bisulfites, aqueous solution,  
n.o.s.  
2693 154 Bisulfites, inorganic, aqueous  
solutions, n.o.s.  
2693 154 Bisulphites, aqueous solution,  
n.o.s.  
2693 154 Bisulphites, inorganic, aqueous  
solutions, n.o.s.  
2693 154 Calcium hydrogen sulfite,  
solution

**ID Guide Name of Material  
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2693 154 Calcium hydrogen sulphite,  
solution  
2693 154 Magnesium bisulfite solution  
2693 154 Magnesium bisulphite solution  
2693 154 Potassium bisulfite solution  
2693 154 Potassium bisulphite solution  
2693 154 Zinc bisulfite solution  
2693 154 Zinc bisulphite solution  
2698 156 Tetrahydrophthalic anhydrides  
2699 154 Trifluoroacetic acid  
2705 153P 1-Pentol  
2707 128 Dimethyldioxanes  
2708 127 Butoxyl  
2709 128 Butylbenzenes  
2710 127 Dipropyl ketone  
2711 129 Dibromobenzene  
2713 153 Acridine  
2714 133 Zinc resinate  
2715 133 Aluminum resinate  
2716 153 1,4-Butynediol  
2717 133 Camphor  
2717 133 Camphor, synthetic  
2719 141 Barium bromate  
2720 141 Chromium nitrate  
2721 141 Copper chlorate  
2722 140 Lithium nitrate  
2723 140 Magnesium chlorate  
2724 140 Manganese nitrate  
2725 140 Nickel nitrate  
2726 140 Nickel nitrite  
2727 141 Thallium nitrate  
2728 140 Zirconium nitrate  
2729 152 Hexachlorobenzene

**ID Guide Name of Material  
No. No.**

2730	152	Nitroanisole
2730	152	Nitroanisole, liquid
2730	152	Nitroanisole, solid
2732	152	Nitrobromobenzene
2732	152	Nitrobromobenzene, liquid
2732	152	Nitrobromobenzene, solid
2733	132	Alkylamines, n.o.s.
2733	132	Amines, flammable, corrosive, n.o.s.
2733	132	Polyalkylamines, n.o.s.
2733	132	Polyamines, flammable, corrosive, n.o.s.
2734	132	Alkylamines, n.o.s.
2734	132	Amines, liquid, corrosive, flammable, n.o.s.
2734	132	Polyalkylamines, n.o.s.
2734	132	Polyamines, liquid, corrosive, flammable, n.o.s.
2735	153	Alkylamines, n.o.s.
2735	153	Amines, liquid, corrosive, n.o.s.
2735	153	Polyalkylamines, n.o.s.
2735	153	Polyamines, liquid, corrosive, n.o.s.
2738	153	N-Butylaniline
2739	156	Butyric anhydride
2740	155	n-Propyl chloroformate
2741	141	Barium hypochlorite, with more than 22% available Chlorine
2742	155	sec-Butyl chloroformate
2742	155	Chloroformates, n.o.s.
2742	155	Chloroformates, poisonous, corrosive, flammable, n.o.s.
2742	155	Chloroformates, toxic, corrosive, flammable, n.o.s.
2742	155	Isobutyl chloroformate

**ID Guide Name of Material  
No. No.**

2743	155	n-Butyl chloroformate
2744	155	Cyclobutyl chloroformate
2745	157	Chloromethyl chloroformate
2746	156	Phenyl chloroformate
2747	156	tert-Butylcyclohexyl chloroformate
2748	156	2-Ethylhexyl chloroformate
2749	130	Tetramethylsilane
2750	153	1,3-Dichloropropanol-2
2751	155	Diethylthiophosphoryl chloride
2752	127	1,2-Epoxy-3-ethoxypropane
2753	153	N-Ethylbenzyltoluidines
2754	153	N-Ethyltoluidines
2755	146	3-Chloroperoxybenzoic acid
2756	146	Organic peroxides, mixtures
2757	151	Carbamate pesticide, solid, poisonous
2757	151	Carbamate pesticide, solid, toxic
2757	151	Carbaryl
2757	151	Carbofuran
2757	151	Mexacarbate
2758	131	Carbamate pesticide, liquid, flammable, poisonous
2758	131	Carbamate pesticide, liquid, flammable, toxic
2759	151	Arsenical pesticide, solid, poisonous
2759	151	Arsenical pesticide, solid, toxic
2760	131	Arsenical pesticide, liquid, flammable, poisonous
2760	131	Arsenical pesticide, liquid, flammable, toxic
2761	151	Aldrin, solid
2761	151	Aldrin mixture, dry



<b>ID No.</b>	<b>Guide No.</b>	<b>Name of Material</b>	<b>ID No.</b>	<b>Guide No.</b>	<b>Name of Material</b>
2761	151	DDT	2766	131	Phenoxy pesticide, liquid, flammable, toxic
2761	151	Dichlorodiphenyltrichloroethane (DDT)	2767	151	Phenyl urea pesticide, solid, poisonous
2761	151	Dieldrin	2767	151	Phenyl urea pesticide, solid, toxic
2761	151	Endosulfan	2768	131	Phenyl urea pesticide, liquid, flammable, poisonous
2761	151	Lindane	2768	131	Phenyl urea pesticide, liquid, flammable, toxic
2761	151	Organochlorine pesticide, solid, poisonous	2769	151	Benzoic derivative pesticide, solid, poisonous
2761	151	Organochlorine pesticide, solid, toxic	2769	151	Benzoic derivative pesticide, solid, toxic
2761	151	TDE (1,1-Dichloro-2,2-bis-(p-chlorophenyl)ethane)	2770	131	Benzoic derivative pesticide, liquid, flammable, poisonous
2761	151	Toxaphene	2770	131	Benzoic derivative pesticide, liquid, flammable, toxic
2762	131	Aldrin, liquid	2771	151	Dithiocarbamate pesticide, solid, poisonous
2762	131	Aldrin mixture, liquid	2771	151	Dithiocarbamate pesticide, solid, toxic
2762	131	Organochlorine pesticide, liquid, flammable, poisonous	2771	151	Thiocarbamate pesticide, solid, poisonous
2762	131	Organochlorine pesticide, liquid, flammable, toxic	2771	151	Thiocarbamate pesticide, solid, toxic
2763	151	Triazine pesticide, solid, poisonous	2771	151	Thiram
2763	151	Triazine pesticide, solid, toxic	2772	131	Dithiocarbamate pesticide, liquid, flammable, poisonous
2764	131	Triazine pesticide, liquid, flammable, poisonous	2772	131	Dithiocarbamate pesticide, liquid, flammable, toxic
2764	131	Triazine pesticide, liquid, flammable, toxic	2772	131	Thiocarbamate pesticide, liquid, flammable, poisonous
2765	152	2,4-Dichlorophenoxyacetic acid	2772	131	Thiocarbamate pesticide, liquid, flammable, toxic
2765	152	Phenoxy pesticide, solid, poisonous	2773	151	Phthalimide derivative pesticide, solid, poisonous
2765	152	Phenoxy pesticide, solid, toxic			
2765	152	2,4,5-Trichlorophenoxyacetic acid			
2765	152	2,4,5-Trichlorophenoxypropionic acid			
2766	131	Phenoxy pesticide, liquid, flammable, poisonous			

ID No.	Guide No.	Name of Material	ID No.	Guide No.	Name of Material
2773	151	Phthalimide derivative pesticide, solid, toxic	2782	131	Bipyridilium pesticide, liquid, flammable, poisonous
2774	131	Phthalimide derivative pesticide, liquid, flammable, poisonous	2782	131	Bipyridilium pesticide, liquid, flammable, toxic
2774	131	Phthalimide derivative pesticide, liquid, flammable, toxic	2783	152	Azinphos methyl
2775	151	Copper based pesticide, solid, poisonous	2783	152	Chlorpyrifos
2775	151	Copper based pesticide, solid, toxic	2783	152	Coumaphos
2776	131	Copper based pesticide, liquid, flammable, poisonous	2783	152	Diazinon
2776	131	Copper based pesticide, liquid, flammable, toxic	2783	152	Dichlorvos
2777	151	Mercury based pesticide, solid, poisonous	2783	152	Disulfoton
2777	151	Mercury based pesticide, solid, toxic	2783	152	Ethion
2778	131	Mercury based pesticide, liquid, flammable, poisonous	2783	152	Hexaethyl tetraphosphate mixture, liquid
2778	131	Mercury based pesticide, liquid, flammable, toxic	2783	152	Methyl parathion, liquid
2779	153	Substituted nitrophenol pesticide, solid, poisonous	2783	152	Methyl parathion, mixture, dry
2779	153	Substituted nitrophenol pesticide, solid, toxic	2783	152	Methyl parathion, solid
2780	131	Substituted nitrophenol pesticide, liquid, flammable, poisonous	2783	152	Mevinphos
2780	131	Substituted nitrophenol pesticide, liquid, flammable, toxic	2783	152	Organic phosphate, dry
2781	151	Bipyridilium pesticide, solid, poisonous	2783	152	Organic phosphate, solid
2781	151	Bipyridilium pesticide, solid, toxic	2783	152	Organic phosphate compound, dry
			2783	152	Organic phosphate compound, solid
			2783	152	Organic phosphorus compound, dry
			2783	152	Organic phosphorus compound, solid
			2783	152	Organophosphorus pesticide, solid, poisonous
			2783	152	Organophosphorus pesticide, solid, toxic
			2783	152	Parathion
			2783	152	Parathion mixture, dry
			2783	152	Parathion mixture, liquid
			2783	152	Tetraethyl pyrophosphate, liquid

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2783 152 Tetraethyl pyrophosphate, solid  
2783 152 Tetraethyl pyrophosphate  
mixture, dry  
2783 152 Trichlorfon  
2784 131 Organophosphorus pesticide,  
liquid, flammable, poisonous  
2784 131 Organophosphorus pesticide,  
liquid, flammable, toxic  
2785 152 4-Thiapentanal  
2785 152 Thia-4-pentanal  
2786 153 Organotin pesticide, solid,  
poisonous  
2786 153 Organotin pesticide, solid, toxic  
2787 131 Organotin pesticide, liquid,  
flammable, poisonous  
2787 131 Organotin pesticide, liquid,  
flammable, toxic  
2788 153 Organotin compound, liquid, n.o.s.  
2789 132 Acetic acid, glacial  
2789 132 Acetic acid, solution, more than  
80% acid  
2790 153 Acetic acid, solution, more than  
10% but not more than 80%  
acid  
2793 170 Ferrous metal borings,  
shavings, turnings or cuttings  
2793 170 Steel swarf  
2794 154 Batteries, wet, filled with acid  
2794 154 Battery  
2795 154 Batteries, wet, filled with alkali  
2795 154 Battery  
2796 157 Battery fluid, acid  
2796 157 Battery fluid, acid, with battery  
2796 157 Battery fluid, acid, with  
electronic equipment or  
actuating device

**ID Guide Name of Material**  
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2796 157 Sulfuric acid, with not more than  
51% acid  
2796 157 Sulphuric acid, with not more  
than 51% acid  
2797 154 Battery fluid, alkali  
2797 154 Battery fluid, alkali, with battery  
2797 154 Battery fluid, alkali, with  
electronic equipment or  
actuating device  
2798 137 Benzene phosphorus dichloride  
2798 137 Phenylphosphorus dichloride  
2799 137 Benzene phosphorus  
thiodichloride  
2799 137 Phenylphosphorus  
thiodichloride  
2800 154 Batteries, wet, non-spillable  
2801 154 Coal tar dye, liquid  
2801 154 Dye, liquid, corrosive, n.o.s.  
2801 154 Dye intermediate, liquid,  
corrosive, n.o.s.  
2802 154 Copper chloride  
2803 172 Gallium  
2805 138 Lithium hydride, fused solid  
2806 138 Lithium nitride  
2807 171 Magnetized material  
2809 172 Mercury  
2809 172 Mercury, metallic  
2809 172 Mercury metal  
2810 153 Bis-(2-chloroethyl) ethylamine  
2810 153 Bis-(2-chloroethyl) methylamine  
2810 153 Bis-(2-chloroethyl) sulfide  
2810 153 Bis-(2-chloroethyl) sulphide  
2810 153 Buzz  
2810 153 BZ

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2810 153 o-Chlorobenzylidene malononitrile  
2810 153 Compound, tree or weed killing, liquid (toxic)  
2810 153 CS  
2810 153 DC  
2810 153 Dichloro-(2-chlorovinyl) arsine  
2810 153 Diphenylcyanoarsine  
2810 153 Drugs, liquid, n.o.s.  
2810 153 O-Ethyl S-(2-diisopropylaminoethyl methylphosphonothiolate  
2810 153 Ethyl N,N-dimethylphosphoramidocyanidate  
2810 153 GA  
2810 153 GB  
2810 153 GD  
2810 153 GF  
2810 153 H  
2810 153 HD  
2810 153 HL  
2810 153 HN-1 (nitrogen mustard)  
2810 153 HN-2  
2810 153 HN-3  
2810 153 Isopropyl methylphosphonofluoridate  
2810 153 L (Lewisite)  
2810 153 Lewisite  
2810 153 Medicines, poisonous, liquid, n.o.s.  
2810 153 Medicines, toxic, liquid, n.o.s.  
2810 153 Mustard  
2810 153 Mustard Lewisite  
2810 153 Poison B, liquid, n.o.s.

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No. No.**

2810 153 Pinacolyl methylphosphonofluoridate  
2810 153 Poisonous liquid, n.o.s.  
2810 153 Poisonous liquid, n.o.s. (Inhalation Hazard Zone A)  
2810 153 Poisonous liquid, n.o.s. (Inhalation Hazard Zone B)  
2810 153 Poisonous liquid, organic, n.o.s.  
2810 153 Poisonous liquid, organic, n.o.s. (Inhalation Hazard Zone A)  
2810 153 Poisonous liquid, organic, n.o.s. (Inhalation Hazard Zone B)  
2810 153 Sarin  
2810 153 Soman  
2810 153 Tabun  
2810 153 Thickened GD  
2810 153 Toxic liquid, n.o.s.  
2810 153 Toxic liquid, n.o.s. (Inhalation Hazard Zone A)  
2810 153 Toxic liquid, n.o.s. (Inhalation Hazard Zone B)  
2810 153 Toxic liquid, organic, n.o.s.  
2810 153 Toxic liquid, organic, n.o.s. (Inhalation Hazard Zone A)  
2810 153 Toxic liquid, organic, n.o.s. (Inhalation Hazard Zone B)  
2810 153 Tris-(2-chloroethyl) amine  
2810 153 VX  
2811 154 CX  
2811 154 Drugs, solid, n.o.s.  
2811 154 Flue dust, poisonous  
2811 154 Lead fluoride  
2811 154 Medicines, poisonous, solid, n.o.s.  
2811 154 Medicines, toxic, solid, n.o.s.  
2811 154 Phosgene oxime

**ID Guide Name of Material  
No. No.**

2811 154 Poison B, solid, n.o.s.  
2811 154 Poisonous solid, n.o.s.  
2811 154 Poisonous solid, organic, n.o.s.  
2811 154 Selenium oxide  
2811 154 Toxic solid, n.o.s.  
2811 154 Toxic solid, organic, n.o.s.  
2812 154 Sodium aluminate, solid  
2813 138 Lithium acetylide-  
Ethylenediamine complex  
2813 138 Substances, which in contact  
with water emit flammable  
gases, solid, n.o.s.  
2813 138 Water-reactive solid, n.o.s.  
2813 138 Water-reactive substances,  
solid, n.o.s.  
2814 158 Etiologic agent, n.o.s.  
2814 158 Infectious substance, affecting  
humans  
2815 153 N-Aminoethylpiperazine  
2817 154 Ammonium bifluoride, solution  
2817 154 Ammonium hydrogendifluoride,  
solution  
2817 154 Ammonium hydrogen fluoride,  
solution  
2818 154 Ammonium polysulfide, solution  
2818 154 Ammonium polysulphide,  
solution  
2819 153 Amyl acid phosphate  
2820 153 Butyric acid  
2821 153 Phenol, liquid  
2821 153 Phenol solution  
2822 153 2-Chloropyridine  
2823 153 Crotonic acid  
2823 153 Crotonic acid, liquid  
2823 153 Crotonic acid, solid

**ID Guide Name of Material  
No. No.**

2826 155 Ethyl chlorothioformate  
2829 153 Caproic acid  
2829 153 Hexanoic acid  
2830 139 Lithium ferrosilicon  
2831 160 1,1,1-Trichloroethane  
2834 154 Phosphorous acid  
2834 154 Phosphorous acid, ortho  
2835 138 Sodium aluminum hydride  
2837 154 Bisulfates, aqueous solution  
2837 154 Bisulphates, aqueous solution  
2837 154 Sodium bisulfate, solution  
2837 154 Sodium bisulphate, solution  
2837 154 Sodium hydrogen sulfate,  
solution  
2837 154 Sodium hydrogen sulphate,  
solution  
2838 129P Vinyl butyrate, inhibited  
2839 153 Aldol  
2840 129 Butyraldoxime  
2841 131 Di-n-amylamine  
2842 129 Nitroethane  
2844 138 Calcium manganese silicon  
2845 135 Ethyl phosphonous dichloride,  
anhydrous  
2845 135 Methyl phosphonous dichloride  
2845 135 Pyrophoric liquid, n.o.s.  
2845 135 Pyrophoric liquid, organic, n.o.s.  
2846 135 Pyrophoric solid, n.o.s.  
2846 135 Pyrophoric solid, organic, n.o.s.  
2849 153 3-Chloropropanol-1  
2850 128 Propylene tetramer  
2851 157 Boron trifluoride, dihydrate  
2852 113 Dipicryl sulfide, wetted with not  
less than 10% water

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2852 113 Dipicryl sulphide, wetted with  
not less than 10% water

2853 151 Magnesium fluorosilicate

2853 151 Magnesium silicofluoride

2854 151 Ammonium fluorosilicate

2854 151 Ammonium silicofluoride

2855 151 Zinc fluorosilicate

2855 151 Zinc silicofluoride

2856 151 Fluorosilicates, n.o.s.

2856 151 Silicofluorides, n.o.s.

2857 126 Refrigerating machines,  
containing Ammonia solutions  
(UN2073)

2857 126 Refrigerating machines,  
containing Ammonia solutions  
(UN2672)

2857 126 Refrigerating machines,  
containing non-flammable,  
liquefied gas

2857 126 Refrigerating machines,  
containing non-flammable,  
non-poisonous, liquefied gas

2857 126 Refrigerating machines,  
containing non-flammable,  
non-poisonous, non-  
corrosive, liquefied gas

2857 126 Refrigerating machines,  
containing non-flammable,  
non-toxic, liquefied gas

2857 126 Refrigerating machines,  
containing non-flammable,  
non-toxic, non-corrosive,  
liquefied gas

2858 170 Zirconium, dry, coiled wire,  
finished metal sheets or strips

2859 154 Ammonium metavanadate

2860 154 Vanadium trioxide

2861 151 Ammonium polyvanadate

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No. No.**

2862 151 Vanadium pentoxide

2863 154 Sodium ammonium vanadate

2864 151 Potassium metavanadate

2865 154 Hydroxylamine sulfate

2865 154 Hydroxylamine sulphate

2869 157 Titanium trichloride mixture

2870 135 Aluminum borohydride

2870 135 Aluminum borohydride in  
devices

2871 170 Antimony powder

2872 159 Dibromochloropropanes

2873 153 Dibutylaminoethanol

2874 153 Furfuryl alcohol

2875 151 Hexachlorophene

2876 153 Resorcinol

2878 170 Titanium sponge granules

2878 170 Titanium sponge powders

2879 157 Selenium oxychloride

2880 140 Calcium hypochlorite, hydrated,  
with not less than 5.5% but not  
more than 10% water

2880 140 Calcium hypochlorite, hydrated  
mixture, with not less than  
5.5% but not more than 10%  
water

2881 135 Metal catalyst, dry

2881 135 Nickel catalyst, dry

2883 145 2,2-Di-(tert-butylperoxy)-  
propane

2884 145 2,2-Di-(tert-butylperoxy)-  
propane

2885 145 1,1-Di-(tert-butylperoxy)-  
cyclohexane

2886 148 tert-Butyl peroxy-2-  
ethylhexanoate, with 2,2-Di-  
(tert-butylperoxy)butane

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2887 145 tert-Butyl peroxy-2-ethylhexanoate, with 2,2-Di-(tert-butylperoxy)butane

2888 148 tert-Butyl peroxy-2-ethylhexanoate, not more than 50%, with phlegmatizer

2889 148 Diisotridecyl peroxydicarbonate

2890 145 tert-Butyl peroxybenzoate

2891 148 tert-Amyl peroxyneodecanoate

2892 148 Dimyristyl peroxydicarbonate, not more than 42%, in water

2893 145 Lauroyl peroxide, not more than 42%, stable dispersion, in water

2894 148 Di-(4-tert-butylcyclohexyl)-peroxydicarbonate

2895 148 Dicytyl peroxydicarbonate, not more than 42%, in water

2896 147 Cyclohexanone peroxide, not more than 72% as a paste

2897 145 1,1-Di-(tert-butylperoxy)-cyclohexane

2898 148 tert-Amyl peroxy-2-ethylhexanoate

2899 148 Organic peroxides, n.o.s. (including trial quantities)

2900 158 Infectious substance, affecting animals only

2901 124 Bromine chloride

2902 151 Allethrin

2902 151 Insecticide, liquid, poisonous, n.o.s.

2902 151 Pesticide, liquid, poisonous, n.o.s.

2902 151 Pesticide, liquid, toxic, n.o.s.

2903 131 Pesticide, liquid, poisonous, flammable, n.o.s.

ID Guide Name of Material  
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2903 131 Pesticide, liquid, toxic, flammable, n.o.s.

2904 154 Chlorophenates, liquid

2904 154 Chlorophenolates, liquid

2904 154 Phenolates, liquid

2905 154 Chlorophenates, solid

2905 154 Chlorophenolates, solid

2905 154 Phenolates, solid

2906 127 Trisocyanatoisocyanurate of Isophoronedisocyanate, solution (70%)

2907 133 Isosorbide dinitrate mixture

2908 161 Radioactive material, empty packages

2908 161 Radioactive material, excepted package, empty packaging

2909 161 Radioactive material, articles manufactured from depleted Uranium

2909 161 Radioactive material, articles manufactured from natural Thorium

2909 161 Radioactive material, articles manufactured from natural Uranium

2909 161 Radioactive material, excepted package, articles manufactured from depleted Uranium

2909 161 Radioactive material, excepted package, articles manufactured from natural Thorium

2909 161 Radioactive material, excepted package, articles manufactured from natural Uranium

ID No.	Guide No.	Name of Material	ID No.	Guide No.	Name of Material
2910	161	Radioactive material, excepted package, articles manufactured from depleted Uranium	2916	163	Radioactive material, Type B(U) package
2910	161	Radioactive material, excepted package, articles manufactured from natural Thorium	2917	163	Radioactive material, Type B(M) package
2910	161	Radioactive material, excepted package, articles manufactured from natural Uranium	2918	165	Radioactive material, fissile, n.o.s.
2910	161	Radioactive material, excepted package, empty packaging	2919	163	Radioactive material, transported under special arrangement
2910	161	Radioactive material, excepted package, instruments or articles	2920	132	Corrosive liquid, flammable, n.o.s.
2910	161	Radioactive material, excepted package, limited quantity of material	2920	132	Dichlorobutene
2910	161	Radioactive material, limited quantity, n.o.s.	2921	134	Corrosive solid, flammable, n.o.s.
2911	161	Radioactive material, excepted package, instruments or articles	2922	154	Corrosive liquid, poisonous, n.o.s.
2911	161	Radioactive material, instruments or articles	2922	154	Corrosive liquid, toxic, n.o.s.
2912	162	Radioactive material, low specific activity (LSA), n.o.s.	2922	154	Sodium hydrosulfide, solution
2912	162	Radioactive material, low specific activity (LSA-I)	2922	154	Sodium hydrosulphide, solution
2913	162	Radioactive material, surface contaminated objects (SCO)	2923	154	Corrosive solid, poisonous, n.o.s.
2913	162	Radioactive material, surface contaminated objects (SCO-I)	2923	154	Corrosive solid, toxic, n.o.s.
2913	162	Radioactive material, surface contaminated objects (SCO-II)	2923	154	Sodium hydrosulfide, solid
2915	163	Radioactive material, Type A package	2923	154	Sodium hydrosulphide, solid
			2924	132	Dichlorobutene
			2924	132	Flammable liquid, corrosive, n.o.s.
			2925	134	Flammable solid, corrosive, n.o.s.
			2925	134	Flammable solid, corrosive, organic, n.o.s.
			2926	134	Flammable solid, poisonous, n.o.s.
			2926	134	Flammable solid, poisonous, organic, n.o.s.
			2926	134	Flammable solid, toxic, organic, n.o.s.
			2927	154	Ethyl phosphonothioic dichloride, anhydrous
			2927	154	Ethyl phosphorodichloridate
			2927	154	Poisonous liquid, corrosive, n.o.s.



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2927 154 Poisonous liquid, corrosive, n.o.s. (Inhalation Hazard Zone A)  
2927 154 Poisonous liquid, corrosive, n.o.s. (Inhalation Hazard Zone B)  
2927 154 Toxic liquid, corrosive, organic, n.o.s.  
2927 154 Toxic liquid, corrosive, organic, n.o.s. (Inhalation Hazard Zone A)  
2927 154 Toxic liquid, corrosive, organic, n.o.s. (Inhalation Hazard Zone B)  
2928 154 Poisonous solid, corrosive, n.o.s.  
2928 154 Toxic solid, corrosive, organic, n.o.s.  
2929 131 Chloropicrin mixture, flammable  
2929 131 Poisonous liquid, flammable, n.o.s.  
2929 131 Poisonous liquid, flammable, n.o.s. (Inhalation Hazard Zone A)  
2929 131 Poisonous liquid, flammable, n.o.s. (Inhalation Hazard Zone B)  
2929 131 Poisonous liquid, flammable, organic, n.o.s.  
2929 131 Poisonous liquid, flammable, organic, n.o.s. (Inhalation Hazard Zone A)  
2929 131 Poisonous liquid, flammable, organic, n.o.s. (Inhalation Hazard Zone B)  
2929 131 Toxic liquid, flammable, n.o.s.  
2929 131 Toxic liquid, flammable, n.o.s. (Inhalation Hazard Zone A)  
2929 131 Toxic liquid, flammable, n.o.s. (Inhalation Hazard Zone B)

**ID Guide Name of Material  
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2929 131 Toxic liquid, flammable, organic, n.o.s.  
2929 131 Toxic liquid, flammable, organic, n.o.s. (Inhalation Hazard Zone A)  
2929 131 Toxic liquid, flammable, organic, n.o.s. (Inhalation Hazard Zone B)  
2930 134 Poisonous solid, flammable, n.o.s.  
2930 134 Poisonous solid, flammable, organic, n.o.s.  
2930 134 Toxic solid, flammable, n.o.s.  
2930 134 Toxic solid, flammable, organic, n.o.s.  
2931 151 Vanadyl sulfate  
2931 151 Vanadyl sulphate  
2933 132 Methyl 2-chloropropionate  
2934 132 Isopropyl 2-chloropropionate  
2935 132 Ethyl 2-chloropropionate  
2936 153 Thiolactic acid  
2937 153 alpha-Methylbenzyl alcohol  
2937 153 Methylbenzyl alcohol (alpha)  
2938 152 Methyl benzoate  
2940 135 Cyclooctadiene phosphines  
2940 135 9-Phosphabicyclononanes  
2941 153 Fluoroanilines  
2942 153 2-Trifluoromethylaniline  
2943 129 Tetrahydrofurfurylamine  
2945 132 N-Methylbutylamine  
2946 153 2-Amino-5-diethylaminopentane  
2947 155 Isopropyl chloroacetate  
2948 153 3-Trifluoromethylaniline  
2949 154 Sodium hydrosulfide, with not less than 25% water of crystallization

ID No.	Guide No.	Name of Material	ID No.	Guide No.	Name of Material
2949	154	Sodium hydrosulphide, with not less than 25% water of crystallization	2974	164	Radioactive material, special form, n.o.s.
2950	138	Magnesium granules, coated	2975	162	Thorium metal, pyrophoric
2951	149	Diphenyloxide-4,4'-disulfohydrazide	2976	162	Thorium nitrate, solid
2951	149	Diphenyloxide-4,4'-disulphohydrazide	2977	166	Radioactive material, Uranium hexafluoride, fissile
2952	150	Azodiisobutyronitrile	2977	166	Uranium hexafluoride, fissile containing more than 1% Uranium-235
2953	150	2,2'-Azodi-(2,4-dimethylvaleronitrile)	2978	166	Radioactive material, Uranium hexafluoride, non fissile or fissile-excepted
2954	149	1,1'-Azodi-(hexahydrobenzonitrile)	2978	166	Uranium hexafluoride, fissile-excepted
2955	150	2,2'-Azodi-(2,4-dimethyl-4-methoxyvaleronitrile)	2978	166	Uranium hexafluoride, low specific activity
2956	149	5-tert-Butyl-2,4,6-trinitro-m-xylene	2978	166	Uranium hexafluoride, non-fissile
2956	149	Musk xylene	2979	162	Uranium metal, pyrophoric
2965	139	Boron trifluoride dimethyl etherate	2980	162	Uranyl nitrate, hexahydrate, solution
2966	153	Thioglycol	2981	162	Uranyl nitrate, solid
2967	154	Sulfamic acid	2982	163	Radioactive material, n.o.s.
2967	154	Sulphamic acid	2983	129P	Ethylene oxide and Propylene oxide mixture, with not more than 30% Ethylene oxide
2968	135	Maneb, stabilized	2983	129P	Propylene oxide and Ethylene oxide mixture, with not more than 30% Ethylene oxide
2968	135	Maneb preparation, stabilized	2984	140	Hydrogen peroxide, aqueous solution, with not less than 8% but less than 20% Hydrogen peroxide
2969	171	Castor beans, meal, pomace or flake	2985	155	Chlorosilanes, flammable, corrosive, n.o.s.
2970	149	Benzene sulfohydrazide	2985	155	Chlorosilanes, n.o.s.
2970	149	Benzene sulphohydrazide	2986	155	Chlorosilanes, corrosive, flammable, n.o.s.
2971	149	Benzene-1,3-disulfohydrazide			
2971	149	Benzene-1,3-disulphohydrazide			
2972	149	N,N'-Dinitrosopentamethylene tetramine			
2973	149	N,N'-Dinitroso-N,N'-dimethyl terephthalamide			

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2986 155 Chlorosilanes, n.o.s.  
2987 156 Chlorosilanes, corrosive, n.o.s.  
2987 156 Chlorosilanes, n.o.s.  
2988 139 Chlorosilanes, n.o.s.  
2988 139 Chlorosilanes, water-reactive,  
flammable, corrosive, n.o.s.  
2989 133 Lead phosphite, dibasic  
2990 171 Aircraft evacuation slides  
2990 171 Life-saving appliances, self-  
inflating  
2991 131 Carbamate pesticide, liquid,  
poisonous, flammable  
2991 131 Carbamate pesticide, liquid,  
toxic, flammable  
2992 151 Carbamate pesticide, liquid,  
poisonous  
2992 151 Carbamate pesticide, liquid,  
toxic  
2993 131 Arsenical pesticide, liquid,  
poisonous, flammable  
2993 131 Arsenical pesticide, liquid, toxic,  
flammable  
2994 151 Arsenical pesticide, liquid,  
poisonous  
2994 151 Arsenical pesticide, liquid, toxic  
2995 131 Organochlorine pesticide, liquid,  
poisonous, flammable  
2995 131 Organochlorine pesticide, liquid,  
toxic, flammable  
2996 151 Organochlorine pesticide, liquid,  
poisonous  
2996 151 Organochlorine pesticide, liquid,  
toxic  
2997 131 Triazine pesticide, liquid,  
poisonous, flammable  
2997 131 Triazine pesticide, liquid, toxic,  
flammable

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2998 151 Triazine pesticide, liquid,  
poisonous  
2998 151 Triazine pesticide, liquid, toxic  
2999 131 Phenoxy pesticide, liquid,  
poisonous, flammable  
2999 131 Phenoxy pesticide, liquid, toxic,  
flammable  
3000 152 Phenoxy pesticide, liquid,  
poisonous  
3000 152 Phenoxy pesticide, liquid, toxic  
3001 131 Phenyl urea pesticide, liquid,  
poisonous, flammable  
3001 131 Phenyl urea pesticide, liquid,  
toxic, flammable  
3002 151 Phenyl urea pesticide, liquid,  
poisonous  
3002 151 Phenyl urea pesticide, liquid,  
toxic  
3003 131 Benzoic derivative pesticide,  
liquid, poisonous, flammable  
3003 131 Benzoic derivative pesticide,  
liquid, toxic, flammable  
3004 151 Benzoic derivative pesticide,  
liquid, poisonous  
3004 151 Benzoic derivative pesticide,  
liquid, toxic  
3005 131 Dithiocarbamate pesticide,  
liquid, poisonous, flammable  
3005 131 Dithiocarbamate pesticide,  
liquid, toxic, flammable  
3005 131 Thiocarbamate pesticide, liquid,  
poisonous, flammable  
3005 131 Thiocarbamate pesticide, liquid,  
toxic, flammable  
3006 151 Dithiocarbamate pesticide,  
liquid, poisonous  
3006 151 Dithiocarbamate pesticide,  
liquid, toxic

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3006	151	Thiocarbamate pesticide, liquid, poisonous	3014	153	Substituted nitrophenol pesticide, liquid, toxic
3006	151	Thiocarbamate pesticide, liquid, toxic	3015	131	Bipyridilium pesticide, liquid, poisonous, flammable
3007	131	Phthalimide derivative pesticide, liquid, poisonous, flammable	3015	131	Bipyridilium pesticide, liquid, toxic, flammable
3007	131	Phthalimide derivative pesticide, liquid, toxic, flammable	3016	151	Bipyridilium pesticide, liquid, poisonous
3008	151	Phthalimide derivative pesticide, liquid, poisonous	3016	151	Bipyridilium pesticide, liquid, toxic
3008	151	Phthalimide derivative pesticide, liquid, toxic	3017	131	Organophosphorus pesticide, liquid, poisonous, flammable
3009	131	Copper based pesticide, liquid, poisonous, flammable	3017	131	Organophosphorus pesticide, liquid, toxic, flammable
3009	131	Copper based pesticide, liquid, toxic, flammable	3018	152	Methyl parathion, liquid
3010	151	Copper based pesticide, liquid, poisonous	3018	152	Organophosphorus pesticide, liquid, poisonous
3010	151	Copper based pesticide, liquid, toxic	3018	152	Organophosphorus pesticide, liquid, toxic
3011	131	Mercury based pesticide, liquid, poisonous, flammable	3018	152	Tetraethyl pyrophosphate, liquid
3011	131	Mercury based pesticide, liquid, toxic, flammable	3019	131	Organotin pesticide, liquid, poisonous, flammable
3012	151	Mercury based pesticide, liquid, poisonous	3019	131	Organotin pesticide, liquid, toxic, flammable
3012	151	Mercury based pesticide, liquid, toxic	3020	153	Organotin pesticide, liquid, poisonous
3013	131	Substituted nitrophenol pesticide, liquid, poisonous, flammable	3020	153	Organotin pesticide, liquid, toxic
3013	131	Substituted nitrophenol pesticide, liquid, toxic, flammable	3021	131	Pesticide, liquid, flammable, poisonous
3014	153	Substituted nitrophenol pesticide, liquid, poisonous	3021	131	Pesticide, liquid, flammable, toxic
			3022	127P	1,2-Butylene oxide, stabilized
			3023	131	2-Methyl-2-heptanethiol
			3023	131	tert-Octyl mercaptan
			3024	131	Coumarin derivative pesticide, liquid, flammable, poisonous

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3024	131	Coumarin derivative pesticide, liquid, flammable, toxic
3025	131	Coumarin derivative pesticide, liquid, poisonous, flammable
3025	131	Coumarin derivative pesticide, liquid, toxic, flammable
3026	151	Coumarin derivative pesticide, liquid, poisonous
3026	151	Coumarin derivative pesticide, liquid, toxic
3027	151	Coumarin derivative pesticide, solid, poisonous
3027	151	Coumarin derivative pesticide, solid, toxic
3028	154	Batteries, dry, containing Potassium hydroxide, solid
3030	150	2,2'-Azodi-(2-methylbutyronitrile)
3031	149	Self-reactive substances, samples, n.o.s.
3032	149	Self-reactive substances, trial quantities, n.o.s.
3033	149	3-Chloro-4-diethylamino-benzenediazonium zinc chloride
3034	149	4-Dipropylaminobenzene-diazonium zinc chloride
3035	150	3-(2-Hydroxyethoxy)-4-pyrrolidin-1-yl benzene-diazonium zinc chloride
3036	150	2,5-Diethoxy-4-morpholino-benzenediazonium zinc chloride
3037	149	4-[Benzyl(ethyl)amino]-3-ethoxybenzenediazonium zinc chloride
3038	150	4-[Benzyl(methyl)amino]-3-ethoxybenzenediazonium zinc chloride

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3039	150	4-Dimethylamino-6-(2-dimethylaminoethoxy)toluene-2-diazonium zinc chloride
3040	149	Sodium 2-diazo-1-naphthol-4-sulfonate
3040	149	Sodium 2-diazo-1-naphthol-4-sulphonate
3041	149	Sodium 2-diazo-1-naphthol-5-sulfonate
3041	149	Sodium 2-diazo-1-naphthol-5-sulphonate
3042	149	2-Diazo-1-naphthol-4-sulfochloride
3042	149	2-Diazo-1-naphthol-4-sulphochloride
3043	149	2-Diazo-1-naphthol-5-sulfochloride
3043	149	2-Diazo-1-naphthol-5-sulphochloride
3048	157	Aluminum phosphide pesticide
3049	138	Metal alkyl halides, n.o.s.
3049	138	Metal alkyl halides, water-reactive, n.o.s.
3049	138	Metal aryl halides, n.o.s.
3049	138	Metal aryl halides, water-reactive, n.o.s.
3050	138	Metal alkyl hydrides, n.o.s.
3050	138	Metal alkyl hydrides, water-reactive, n.o.s.
3050	138	Metal aryl hydrides, n.o.s.
3050	138	Metal aryl hydrides, water-reactive, n.o.s.
3051	135	Aluminum alkyls
3052	135	Aluminum alkyl halides
3053	135	Magnesium alkyls
3054	131	Cyclohexanethiol

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3054 131 Cyclohexyl mercaptan  
3055 154 2-(2-Aminoethoxy)ethanol  
3056 129 n-Heptaldehyde  
3057 125 Trifluoroacetyl chloride  
3064 127 Nitroglycerin, solution in alcohol, with more than 1% but not more than 5% Nitroglycerin  
3065 127 Alcoholic beverages  
3066 153 Paint (corrosive)  
3066 153 Paint related material (corrosive)  
3070 126 Dichlorodifluoromethane and Ethylene oxide mixture, with not more than 12.5% Ethylene oxide  
3070 126 Dichlorodifluoromethane and Ethylene oxide mixtures, with not more than 12% Ethylene oxide  
3070 126 Ethylene oxide and Dichlorodifluoromethane mixture, with not more than 12.5% Ethylene oxide  
3070 126 Ethylene oxide and Dichlorodifluoromethane mixtures, with not more than 12% Ethylene oxide  
3071 131 Mercaptan mixture, liquid, poisonous, flammable, n.o.s.  
3071 131 Mercaptan mixture, liquid, toxic, flammable, n.o.s.  
3071 131 Mercaptan mixtures, liquid, n.o.s.  
3071 131 Mercaptans, liquid, n.o.s.  
3071 131 Mercaptans, liquid, poisonous, flammable, n.o.s.

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3071 131 Mercaptans, liquid, toxic, flammable, n.o.s.  
3072 171 Aircraft survival kits  
3072 171 Life-saving appliances, not self-inflating  
3073 131P Vinylpyridines, inhibited  
3076 138 Aluminum alkyl hydrides  
3077 171 Environmentally hazardous substances, solid, n.o.s.  
3077 171 Hazardous waste, solid, n.o.s.  
3077 171 Other regulated substances, solid, n.o.s.  
3078 138 Cerium, turnings or gritty powder  
3079 131P Methacrylonitrile, inhibited  
3080 155 Isocyanate solution, poisonous, flammable, n.o.s.  
3080 155 Isocyanate solution, toxic, flammable, n.o.s.  
3080 155 Isocyanate solutions, n.o.s.  
3080 155 Isocyanates, n.o.s.  
3080 155 Isocyanates, poisonous, flammable, n.o.s.  
3080 155 Isocyanates, toxic, flammable, n.o.s.  
3082 171 Environmentally hazardous substances, liquid, n.o.s.  
3082 171 Hazardous waste, liquid, n.o.s.  
3082 171 Other regulated substances, liquid, n.o.s.  
3083 124 Perchloryl fluoride  
3084 140 Corrosive solid, oxidizing, n.o.s.  
3085 140 Oxidizing solid, corrosive, n.o.s.  
3085 140 Oxidizing substances, solid, corrosive, n.o.s.  
3086 141 Poisonous solid, oxidizing, n.o.s.  
3086 141 Toxic solid, oxidizing, n.o.s.

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3087 141 Oxidizing solid, poisonous, n.o.s.  
3087 141 Oxidizing solid, toxic, n.o.s.  
3087 141 Oxidizing substances, solid,  
poisonous, n.o.s.  
3087 141 Oxidizing substances, solid,  
toxic, n.o.s.  
3088 135 Self-heating solid, organic, n.o.s.  
3088 135 Self-heating substances, solid,  
n.o.s.  
3089 170 Metal powder, flammable, n.o.s.  
3090 138 Lithium batteries  
3090 138 Lithium batteries, liquid or solid  
cathode  
3091 138 Lithium batteries contained in  
equipment  
3091 138 Lithium batteries packed with  
equipment  
3092 129 1-Methoxy-2-propanol  
3093 140 Corrosive liquid, oxidizing, n.o.s.  
3094 138 Corrosive liquid, water-reactive,  
n.o.s.  
3094 138 Corrosive liquid, which in  
contact with water emits  
flammable gases, n.o.s.  
3095 136 Corrosive solid, self-heating,  
n.o.s.  
3096 138 Corrosive solid, water-reactive,  
n.o.s.  
3096 138 Corrosive solid, which in contact  
with water emits flammable  
gases, n.o.s.  
3097 140 Flammable solid, oxidizing, n.o.s.  
3098 140 Oxidizing liquid, corrosive, n.o.s.  
3098 140 Oxidizing substances, liquid,  
corrosive, n.o.s.  
3099 142 Oxidizing liquid, poisonous, n.o.s.

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3099 142 Oxidizing liquid, toxic, n.o.s.  
3099 142 Oxidizing substances, liquid,  
poisonous, n.o.s.  
3099 142 Oxidizing substances, liquid,  
toxic, n.o.s.  
3100 135 Oxidizing solid, self-heating,  
n.o.s.  
3100 135 Oxidizing substances, self-  
heating, n.o.s.  
3100 135 Oxidizing substances, solid,  
self-heating, n.o.s.  
3101 146 Organic peroxide type B, liquid  
3102 146 Organic peroxide type B, solid  
3103 146 Organic peroxide type C, liquid  
3104 146 Organic peroxide type C, solid  
3105 145 Organic peroxide type D, liquid  
3106 145 Organic peroxide type D, solid  
3107 145 Organic peroxide type E, liquid  
3108 145 Organic peroxide type E, solid  
3109 145 Organic peroxide type F, liquid  
3110 145 Organic peroxide type F, solid  
3111 148 Organic peroxide type B, liquid,  
temperature controlled  
3112 148 Organic peroxide type B, solid,  
temperature controlled  
3113 148 Organic peroxide type C, liquid,  
temperature controlled  
3114 148 Organic peroxide type C, solid,  
temperature controlled  
3115 148 Organic peroxide type D, liquid,  
temperature controlled  
3116 148 Organic peroxide type D, solid,  
temperature controlled  
3117 148 Organic peroxide type E, liquid,  
temperature controlled

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- 3118 148 Organic peroxide type E, solid, temperature controlled
- 3119 148 Organic peroxide type F, liquid, temperature controlled
- 3120 148 Organic peroxide type F, solid, temperature controlled
- 3121 144 Oxidizing solid, water-reactive, n.o.s.
- 3121 144 Oxidizing substances, solid, which in contact with water emit flammable gases, n.o.s.
- 3122 142 Poisonous liquid, oxidizing, n.o.s.
- 3122 142 Poisonous liquid, oxidizing, n.o.s. (Inhalation Hazard Zone A)
- 3122 142 Poisonous liquid, oxidizing, n.o.s. (Inhalation Hazard Zone B)
- 3122 142 Toxic liquid, oxidizing, n.o.s.
- 3122 142 Toxic liquid, oxidizing, n.o.s. (Inhalation Hazard Zone A)
- 3122 142 Toxic liquid, oxidizing, n.o.s. (Inhalation Hazard Zone B)
- 3123 139 Poisonous liquid, water-reactive, n.o.s.
- 3123 139 Poisonous liquid, water-reactive, n.o.s. (Inhalation Hazard Zone A)
- 3123 139 Poisonous liquid, water-reactive, n.o.s. (Inhalation Hazard Zone B)
- 3123 139 Poisonous liquid, which in contact with water emits flammable gases, n.o.s.
- 3123 139 Poisonous liquid, which in contact with water emits flammable gases, n.o.s. (Inhalation Hazard Zone A)

- 3123 139 Poisonous liquid, which in contact with water emits flammable gases, n.o.s. (Inhalation Hazard Zone B)
- 3123 139 Toxic liquid, water-reactive, n.o.s.
- 3123 139 Toxic liquid, water-reactive, n.o.s. (Inhalation Hazard Zone A)
- 3123 139 Toxic liquid, water-reactive, n.o.s. (Inhalation Hazard Zone B)
- 3123 139 Toxic liquid, which in contact with water emits flammable gases, n.o.s.
- 3123 139 Toxic liquid, which in contact with water emits flammable gases, n.o.s. (Inhalation Hazard Zone A)
- 3123 139 Toxic liquid, which in contact with water emits flammable gases, n.o.s. (Inhalation Hazard Zone B)
- 3124 136 Poisonous solid, self-heating, n.o.s.
- 3124 136 Toxic solid, self-heating, n.o.s.
- 3125 139 Poisonous solid, water-reactive, n.o.s.
- 3125 139 Poisonous solid, which in contact with water emits flammable gases, n.o.s.
- 3125 139 Toxic solid, water-reactive, n.o.s.
- 3125 139 Toxic solid, which in contact with water emits flammable gases, n.o.s.
- 3126 136 Self-heating solid, corrosive, organic, n.o.s.



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- 3126 136 Self-heating substance, solid, corrosive, n.o.s.
- 3127 135 Self-heating solid, oxidizing, n.o.s.
- 3127 135 Self-heating substances, solid, oxidizing, n.o.s.
- 3128 136 Self-heating solid, organic, poisonous, n.o.s.
- 3128 136 Self-heating solid, organic, toxic, n.o.s.
- 3128 136 Self-heating solid, poisonous, organic, n.o.s.
- 3128 136 Self-heating solid, toxic, organic, n.o.s.
- 3128 136 Self-heating substances, solid, poisonous, n.o.s.
- 3128 136 Self-heating substances, solid, toxic, n.o.s.
- 3129 138 Substances, which in contact with water emit flammable gases, liquid, corrosive, n.o.s.
- 3129 138 Water-reactive liquid, corrosive, n.o.s.
- 3129 138 Water-reactive substances, liquid, corrosive, n.o.s.
- 3130 139 Substances, which in contact with water emit flammable gases, liquid, poisonous, n.o.s.
- 3130 139 Substances, which in contact with water emit flammable gases, liquid, toxic, n.o.s.
- 3130 139 Water-reactive liquid, poisonous, n.o.s.
- 3130 139 Water-reactive liquid, toxic, n.o.s.
- 3130 139 Water-reactive substances, liquid, poisonous, n.o.s.

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- 3130 139 Water-reactive substances, liquid, toxic, n.o.s.
- 3131 138 Substances, which in contact with water emit flammable gases, solid, corrosive, n.o.s.
- 3131 138 Water-reactive solid, corrosive, n.o.s.
- 3131 138 Water-reactive substances, solid, corrosive, n.o.s.
- 3132 138 Substances, which in contact with water emit flammable gases, solid, flammable, n.o.s.
- 3132 138 Water-reactive solid, flammable, n.o.s.
- 3132 138 Water-reactive substances, solid, flammable, n.o.s.
- 3133 138 Substances, which in contact with water emit flammable gases, solid, oxidizing, n.o.s.
- 3133 138 Water-reactive solid, oxidizing, n.o.s.
- 3133 138 Water-reactive substances, solid, oxidizing, n.o.s.
- 3134 139 Substances, which in contact with water emit flammable gases, solid, poisonous, n.o.s.
- 3134 139 Substances, which in contact with water emit flammable gases, solid, toxic, n.o.s.
- 3134 139 Water-reactive solid, poisonous, n.o.s.
- 3134 139 Water-reactive solid, toxic, n.o.s.
- 3134 139 Water-reactive substances, solid, poisonous, n.o.s.
- 3134 139 Water-reactive substances, solid, toxic, n.o.s.

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- 3135 138 Substances, which in contact with water emit flammable gases, solid, self-heating, n.o.s.
- 3135 138 Water-reactive solid, self-heating, n.o.s.
- 3135 138 Water-reactive substances, solid, self-heating, n.o.s.
- 3136 120 Trifluoromethane, refrigerated liquid
- 3137 140 Oxidizing solid, flammable, n.o.s.
- 3137 140 Oxidizing substances, solid, flammable, n.o.s.
- 3138 116 Acetylene, Ethylene and Propylene in mixture, refrigerated liquid containing at least 71.5% Ethylene with not more than 22.5% Acetylene and not more than 6% Propylene
- 3138 116 Ethylene, Acetylene and Propylene in mixture, refrigerated liquid containing at least 71.5% Ethylene with not more than 22.5% Acetylene and not more than 6% Propylene
- 3138 116 Propylene, Ethylene and Acetylene in mixture, refrigerated liquid containing at least 71.5% Ethylene with not more than 22.5% Acetylene and not more than 6% Propylene
- 3139 140 Oxidizing liquid, n.o.s.
- 3139 140 Oxidizing substances, liquid, n.o.s.
- 3140 151 Alkaloids, liquid, n.o.s. (poisonous)
- 3140 151 Alkaloid salts, liquid, n.o.s. (poisonous)

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- 3141 157 Antimony compound, inorganic, liquid, n.o.s.
- 3142 151 Disinfectant, liquid, poisonous, n.o.s.
- 3142 151 Disinfectant, liquid, toxic, n.o.s.
- 3142 151 Disinfectants, liquid, n.o.s. (poisonous)
- 3143 151 Dye, solid, poisonous, n.o.s.
- 3143 151 Dye, solid, toxic, n.o.s.
- 3143 151 Dye intermediate, solid, poisonous, n.o.s.
- 3143 151 Dye intermediate, solid, toxic, n.o.s.
- 3144 151 Nicotine compound, liquid, n.o.s.
- 3144 151 Nicotine preparation, liquid, n.o.s.
- 3145 153 Alkyl phenols, liquid, n.o.s. (including C2-C12 homologues)
- 3146 153 Organotin compound, solid, n.o.s.
- 3147 154 Dye, solid, corrosive, n.o.s.
- 3147 154 Dye intermediate, solid, corrosive, n.o.s.
- 3148 138 Substances, which in contact with water emit flammable gases, liquid, n.o.s.
- 3148 138 Water-reactive liquid, n.o.s.
- 3148 138 Water-reactive substances, liquid, n.o.s.
- 3149 140 Hydrogen peroxide and Peroxyacetic acid mixture, with acid(s), water and not more than 5% Peroxyacetic acid, stabilized
- 3150 115 Devices, small, hydrocarbon gas powered, with release device

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3150	115	Hydrocarbon gas refills for small devices, with release device	3160	119	Liquefied gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone A)
3151	171	Polyhalogenated biphenyls, liquid	3160	119	Liquefied gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone B)
3151	171	Polyhalogenated terphenyls, liquid	3160	119	Liquefied gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone C)
3152	171	Polyhalogenated biphenyls, solid	3160	119	Liquefied gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone D)
3152	171	Polyhalogenated terphenyls, solid	3161	115	Liquefied gas, flammable, n.o.s.
3153	115	Perfluoromethyl vinyl ether	3162	123	Liquefied gas, poisonous, n.o.s.
3153	115	Perfluoro(methyl vinyl ether)	3162	123	Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone A)
3154	115	Perfluoroethyl vinyl ether	3162	123	Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone B)
3154	115	Perfluoro(ethyl vinyl ether)	3162	123	Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone C)
3155	154	Pentachlorophenol	3162	123	Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone D)
3156	122	Compressed gas, oxidizing, n.o.s.	3162	123	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone A)
3157	122	Liquefied gas, oxidizing, n.o.s.	3162	123	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone B)
3158	120	Gas, refrigerated liquid, n.o.s.	3162	123	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone C)
3159	126	Refrigerant gas R-134a	3162	123	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone D)
3159	126	1,1,1,2-Tetrafluoroethane	3163	126	Liquefied gas, n.o.s.
3160	119	Liquefied gas, poisonous, flammable, n.o.s.	3164	126	Articles, pressurized, hydraulic (containing non-flammable gas)
3160	119	Liquefied gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone A)	3164	126	Articles, pressurized, pneumatic (containing non-flammable gas)
3160	119	Liquefied gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone B)			
3160	119	Liquefied gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone C)			
3160	119	Liquefied gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone D)			
3160	119	Liquefied gas, toxic, flammable, n.o.s.			

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3165	131	Aircraft hydraulic power unit fuel tank	3172	153	Toxins, extracted from living sources, liquid, n.o.s.
3166	128	Engines, internal combustion, flammable gas powered	3172	153	Toxins, extracted from living sources, n.o.s.
3166	128	Engines, internal combustion, flammable liquid powered	3172	153	Toxins, extracted from living sources, solid, n.o.s.
3166	128	Engines, internal combustion, including when fitted in machinery or vehicles	3174	135	Titanium disulfide
3166	128	Vehicle, flammable gas powered	3174	135	Titanium disulphide
3166	128	Vehicle, flammable liquid powered	3175	133	Solids containing flammable liquid, n.o.s.
3167	115	Gas sample, non-pressurized, flammable, n.o.s., not refrigerated liquid	3176	133	Flammable solid, organic, molten, n.o.s.
3168	119	Gas sample, non-pressurized, poisonous, flammable, n.o.s., not refrigerated liquid	3178	133	Flammable solid, inorganic, n.o.s.
3168	119	Gas sample, non-pressurized, toxic, flammable, n.o.s., not refrigerated liquid	3178	133	Smokeless powder for small arms
3169	123	Gas sample, non-pressurized, poisonous, n.o.s., not refrigerated liquid	3179	134	Flammable solid, poisonous, inorganic, n.o.s.
3169	123	Gas sample, non-pressurized, toxic, n.o.s., not refrigerated liquid	3179	134	Flammable solid, toxic, inorganic, n.o.s.
3170	138	Aluminum dross	3180	134	Flammable solid, corrosive, inorganic, n.o.s.
3170	138	Aluminum processing by-products	3180	134	Flammable solid, inorganic, corrosive, n.o.s.
3170	138	Aluminum remelting by-products	3181	133	Metal salts of organic compounds, flammable, n.o.s.
3170	138	Aluminum smelting by-products	3182	170	Metal hydrides, flammable, n.o.s.
3171	154	Battery-powered equipment (wet battery)	3183	135	Self-heating liquid, organic, n.o.s.
3171	154	Battery-powered vehicle (wet battery)	3184	136	Self-heating liquid, poisonous, organic, n.o.s.
3171	154	Wheelchair, electric, with batteries	3184	136	Self-heating liquid, toxic, organic, n.o.s.
			3185	136	Self-heating liquid, corrosive, organic, n.o.s.
			3186	135	Self-heating liquid, inorganic, n.o.s.
			3187	136	Self-heating liquid, poisonous, inorganic, n.o.s.

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3187 136 Self-heating liquid, toxic, inorganic, n.o.s.  
3188 136 Self-heating liquid, corrosive, inorganic, n.o.s.  
3189 135 Metal powder, self-heating, n.o.s.  
3189 135 Self-heating metal powders, n.o.s.  
3190 135 Self-heating solid, inorganic, n.o.s.  
3191 136 Self-heating solid, inorganic, poisonous, n.o.s.  
3191 136 Self-heating solid, inorganic, toxic, n.o.s.  
3191 136 Self-heating solid, poisonous, inorganic, n.o.s.  
3191 136 Self-heating solid, toxic, inorganic, n.o.s.  
3192 136 Self-heating solid, corrosive, inorganic, n.o.s.  
3194 135 Pyrophoric liquid, inorganic, n.o.s.  
3200 135 Pyrophoric solid, inorganic, n.o.s.  
3203 135 Pyrophoric organometallic compound, n.o.s.  
3203 135 Pyrophoric organometallic compound, water-reactive, n.o.s.  
3205 135 Alkaline earth metal alcoholates, n.o.s.  
3206 136 Alkali metal alcoholates, self-heating, corrosive, n.o.s.  
3207 138 Organometallic compound, water-reactive, flammable, n.o.s.  
3207 138 Organometallic compound dispersion, water-reactive, flammable, n.o.s.  
3207 138 Organometallic compound solution, water-reactive, flammable, n.o.s.

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3208 138 Metallic substance, water-reactive, n.o.s.  
3209 138 Metallic substance, water-reactive, self-heating, n.o.s.  
3210 140 Chlorates, inorganic, aqueous solution, n.o.s.  
3211 140 Perchlorates, inorganic, aqueous solution, n.o.s.  
3212 140 Hypochlorites, inorganic, n.o.s.  
3213 140 Bromates, inorganic, aqueous solution, n.o.s.  
3214 140 Permanganates, inorganic, aqueous solution, n.o.s.  
3215 140 Persulfates, inorganic, n.o.s.  
3215 140 Persulphates, inorganic, n.o.s.  
3216 140 Persulfates, inorganic, aqueous solution, n.o.s.  
3216 140 Persulphates, inorganic, aqueous solution, n.o.s.  
3217 140 Percarbonates, inorganic, n.o.s.  
3218 140 Nitrates, inorganic, aqueous solution, n.o.s.  
3219 140 Nitrites, inorganic, aqueous solution, n.o.s.  
3220 126 Pentafluoroethane  
3220 126 Refrigerant gas R-125  
3221 149 Self-reactive liquid type B  
3222 149 Self-reactive solid type B  
3223 149 Self-reactive liquid type C  
3224 149 Self-reactive solid type C  
3225 149 Self-reactive liquid type D  
3226 149 Self-reactive solid type D  
3227 149 Self-reactive liquid type E  
3228 149 Self-reactive solid type E  
3229 149 Self-reactive liquid type F

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3230 149 Self-reactive solid type F  
3231 150 Self-reactive liquid type B,  
temperature controlled  
3232 150 Self-reactive solid type B,  
temperature controlled  
3233 150 Self-reactive liquid type C,  
temperature controlled  
3234 150 Self-reactive solid type C,  
temperature controlled  
3235 150 Self-reactive liquid type D,  
temperature controlled  
3236 150 Self-reactive solid type D,  
temperature controlled  
3237 150 Self-reactive liquid type E,  
temperature controlled  
3238 150 Self-reactive solid type E,  
temperature controlled  
3239 150 Self-reactive liquid type F,  
temperature controlled  
3240 150 Self-reactive solid type F,  
temperature controlled  
3241 133 2-Bromo-2-nitropropane-1,3-diol  
3242 149 Azodicarbonamide  
3243 151 Solids containing poisonous  
liquid, n.o.s.  
3243 151 Solids containing toxic liquid,  
n.o.s.  
3244 154 Solids containing corrosive  
liquid, n.o.s.  
3245 171 Genetically modified micro-  
organisms  
3246 156 Methanesulfonyl chloride  
3246 156 Methanesulphonyl chloride  
3247 140 Sodium peroxoborate,  
anhydrous  
3248 131 Medicine, liquid, flammable,  
poisonous, n.o.s.

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3248 131 Medicine, liquid, flammable,  
toxic, n.o.s.  
3249 151 Medicine, solid, poisonous, n.o.s.  
3249 151 Medicine, solid, toxic, n.o.s.  
3250 153 Chloroacetic acid, molten  
3251 133 Isosorbide-5-mononitrate  
3252 115 Difluoromethane  
3252 115 Refrigerant gas R-32  
3253 154 Disodium trioxosilicate  
3253 154 Disodium trioxosilicate,  
pentahydrate  
3254 135 Tributylphosphane  
3254 135 Tributylphosphine  
3255 135 tert-Butyl hypochlorite  
3256 128 Elevated temperature liquid,  
flammable, n.o.s., with flash  
point above 37.8°C (100°F),  
at or above its flash point  
3256 128 Elevated temperature liquid,  
flammable, n.o.s., with flash  
point above 60.5°C (141°F),  
at or above its flash point  
3257 128 Elevated temperature liquid,  
n.o.s., at or above 100°C  
(212°F) and below its flash  
point  
3258 171 Elevated temperature solid,  
n.o.s., at or above 240°C  
(464°F)  
3259 154 Amines, solid, corrosive, n.o.s.  
3259 154 Polyamines, solid, corrosive, n.o.s.  
3260 154 Corrosive solid, acidic,  
inorganic, n.o.s.  
3261 154 Corrosive solid, acidic, organic,  
n.o.s.  
3262 154 Corrosive solid, basic,  
inorganic, n.o.s.

ID No.	Guide No.	Name of Material	ID No.	Guide No.	Name of Material
3263	154	Corrosive solid, basic, organic, n.o.s.	3278	151	Organophosphorus compound, poisonous, n.o.s.
3264	154	Corrosive liquid, acidic, inorganic, n.o.s.	3278	151	Organophosphorus compound, toxic, n.o.s.
3265	153	Corrosive liquid, acidic, organic, n.o.s.	3279	131	Organophosphorus compound, poisonous, flammable, n.o.s.
3266	154	Corrosive liquid, basic, inorganic, n.o.s.	3279	131	Organophosphorus compound, toxic, flammable, n.o.s.
3267	153	Corrosive liquid, basic, organic, n.o.s.	3280	151	Organoarsenic compound, n.o.s.
3268	171	Air bag inflators	3281	151	Metal carbonyls, n.o.s.
3268	171	Air bag inflators, pyrotechnic	3282	151	Organometallic compound, poisonous, n.o.s.
3268	171	Air bag modules	3282	151	Organometallic compound, toxic, n.o.s.
3268	171	Air bag modules, pyrotechnic	3283	151	Selenium compound, n.o.s.
3268	171	Seat-belt modules	3284	151	Tellurium compound, n.o.s.
3268	171	Seat-belt pre-tensioners	3285	151	Vanadium compound, n.o.s.
3268	171	Seat-belt pre-tensioners, pyrotechnic	3286	131	Flammable liquid, poisonous, corrosive, n.o.s.
3269	127	Polyester resin kit	3286	131	Flammable liquid, toxic, corrosive, n.o.s.
3270	133	Nitrocellulose membrane filters	3287	151	Poisonous liquid, inorganic, n.o.s.
3271	127	Ethers, n.o.s.	3287	151	Poisonous liquid, inorganic, n.o.s. (Inhalation Hazard Zone A)
3272	127	Esters, n.o.s.	3287	151	Poisonous liquid, inorganic, n.o.s. (Inhalation Hazard Zone B)
3273	131	Nitriles, flammable, poisonous, n.o.s.	3287	151	Toxic liquid, inorganic, n.o.s.
3273	131	Nitriles, flammable, toxic, n.o.s.	3287	151	Toxic liquid, inorganic, n.o.s. (Inhalation Hazard Zone A)
3274	127	Alcoholates solution, n.o.s., in alcohol	3287	151	Toxic liquid, inorganic, n.o.s. (Inhalation Hazard Zone B)
3275	131	Nitriles, poisonous, flammable, n.o.s.	3288	151	Poisonous solid, inorganic, n.o.s.
3275	131	Nitriles, toxic, flammable, n.o.s.	3288	151	Toxic solid, inorganic, n.o.s.
3276	151	Nitriles, poisonous, n.o.s.			
3276	151	Nitriles, toxic, n.o.s.			
3277	154	Chloroformates, poisonous, corrosive, n.o.s.			
3277	154	Chloroformates, toxic, corrosive, n.o.s.			

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- 3289 154 Poisonous liquid, corrosive, inorganic, n.o.s.
- 3289 154 Poisonous liquid, corrosive, inorganic, n.o.s. (Inhalation Hazard Zone A)
- 3289 154 Poisonous liquid, corrosive, inorganic, n.o.s. (Inhalation Hazard Zone B)
- 3289 154 Toxic liquid, corrosive, inorganic, n.o.s.
- 3289 154 Toxic liquid, corrosive, inorganic, n.o.s. (Inhalation Hazard Zone A)
- 3289 154 Toxic liquid, corrosive, inorganic, n.o.s. (Inhalation Hazard Zone B)
- 3290 154 Poisonous solid, corrosive, inorganic, n.o.s.
- 3290 154 Toxic solid, corrosive, inorganic, n.o.s.
- 3291 158 (Bio)Medical waste, n.o.s.
- 3291 158 Clinical waste, unspecified, n.o.s.
- 3291 158 Medical waste, n.o.s.
- 3291 158 Regulated medical waste, n.o.s.
- 3292 138 Batteries, containing Sodium
- 3292 138 Cells, containing Sodium
- 3293 152 Hydrazine, aqueous solution, with not more than 37% Hydrazine
- 3294 131 Hydrogen cyanide, solution in alcohol, with not more than 45% Hydrogen cyanide
- 3295 128 Hydrocarbons, liquid, n.o.s.
- 3296 126 Heptafluoropropane
- 3296 126 Refrigerant gas R-227

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- 3297 126 Chlorotetrafluoroethane and Ethylene oxide mixture, with not more than 8.8% Ethylene oxide
- 3297 126 Ethylene oxide and Chlorotetrafluoroethane mixture, with not more than 8.8% Ethylene oxide
- 3298 126 Ethylene oxide and Pentafluoroethane mixture, with not more than 7.9% Ethylene oxide
- 3298 126 Pentafluoroethane and Ethylene oxide mixture, with not more than 7.9% Ethylene oxide
- 3299 126 Ethylene oxide and Tetrafluoroethane mixture, with not more than 5.6% Ethylene oxide
- 3299 126 Tetrafluoroethane and Ethylene oxide mixture, with not more than 5.6% Ethylene oxide
- 3300 119P Carbon dioxide and Ethylene oxide mixture, with more than 87% Ethylene oxide
- 3300 119P Ethylene oxide and Carbon dioxide mixture, with more than 87% Ethylene oxide
- 3301 136 Corrosive liquid, self-heating, n.o.s.
- 3302 152 2-Dimethylaminoethyl acrylate
- 3303 124 Compressed gas, poisonous, oxidizing, n.o.s.
- 3303 124 Compressed gas, poisonous, oxidizing, n.o.s. (Inhalation Hazard Zone A)
- 3303 124 Compressed gas, poisonous, oxidizing, n.o.s. (Inhalation Hazard Zone B)



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3303 124 Compressed gas, poisonous,  
oxidizing, n.o.s. (Inhalation  
Hazard Zone C)

3303 124 Compressed gas, poisonous,  
oxidizing, n.o.s. (Inhalation  
Hazard Zone D)

3303 124 Compressed gas, toxic,  
oxidizing, n.o.s.

3303 124 Compressed gas, toxic,  
oxidizing, n.o.s. (Inhalation  
Hazard Zone A)

3303 124 Compressed gas, toxic,  
oxidizing, n.o.s. (Inhalation  
Hazard Zone B)

3303 124 Compressed gas, toxic,  
oxidizing, n.o.s. (Inhalation  
Hazard Zone C)

3303 124 Compressed gas, toxic,  
oxidizing, n.o.s. (Inhalation  
Hazard Zone D)

3304 123 Compressed gas, poisonous,  
corrosive, n.o.s.

3304 123 Compressed gas, poisonous,  
corrosive, n.o.s. (Inhalation  
Hazard Zone A)

3304 123 Compressed gas, poisonous,  
corrosive, n.o.s. (Inhalation  
Hazard Zone B)

3304 123 Compressed gas, poisonous,  
corrosive, n.o.s. (Inhalation  
Hazard Zone C)

3304 123 Compressed gas, poisonous,  
corrosive, n.o.s. (Inhalation  
Hazard Zone D)

3304 123 Compressed gas, toxic,  
corrosive, n.o.s.

3304 123 Compressed gas, toxic,  
corrosive, n.o.s. (Inhalation  
Hazard Zone A)

**ID Guide Name of Material  
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3304 123 Compressed gas, toxic,  
corrosive, n.o.s. (Inhalation  
Hazard Zone B)

3304 123 Compressed gas, toxic,  
corrosive, n.o.s. (Inhalation  
Hazard Zone C)

3304 123 Compressed gas, toxic,  
corrosive, n.o.s. (Inhalation  
Hazard Zone D)

3305 119 Compressed gas, poisonous,  
flammable, corrosive, n.o.s.

3305 119 Compressed gas, poisonous,  
flammable, corrosive, n.o.s.  
(Inhalation Hazard Zone A)

3305 119 Compressed gas, poisonous,  
flammable, corrosive, n.o.s.  
(Inhalation Hazard Zone B)

3305 119 Compressed gas, poisonous,  
flammable, corrosive, n.o.s.  
(Inhalation Hazard Zone C)

3305 119 Compressed gas, poisonous,  
flammable, corrosive, n.o.s.  
(Inhalation Hazard Zone D)

3305 119 Compressed gas, toxic,  
flammable, corrosive, n.o.s.

3305 119 Compressed gas, toxic,  
flammable, corrosive, n.o.s.  
(Inhalation Hazard Zone A)

3305 119 Compressed gas, toxic,  
flammable, corrosive, n.o.s.  
(Inhalation Hazard Zone B)

3305 119 Compressed gas, toxic,  
flammable, corrosive, n.o.s.  
(Inhalation Hazard Zone C)

3305 119 Compressed gas, toxic,  
flammable, corrosive, n.o.s.  
(Inhalation Hazard Zone D)

3306 124 Compressed gas, poisonous,  
oxidizing, corrosive, n.o.s.

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No. No.**

- 3306 124 Compressed gas, poisonous, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone A)
- 3306 124 Compressed gas, poisonous, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone B)
- 3306 124 Compressed gas, poisonous, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone C)
- 3306 124 Compressed gas, poisonous, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone D)
- 3306 124 Compressed gas, toxic, oxidizing, corrosive, n.o.s.
- 3306 124 Compressed gas, toxic, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone A)
- 3306 124 Compressed gas, toxic, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone B)
- 3306 124 Compressed gas, toxic, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone C)
- 3306 124 Compressed gas, toxic, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone D)
- 3307 124 Liquefied gas, poisonous, oxidizing, n.o.s.
- 3307 124 Liquefied gas, poisonous, oxidizing, n.o.s. (Inhalation Hazard Zone A)
- 3307 124 Liquefied gas, poisonous, oxidizing, n.o.s. (Inhalation Hazard Zone B)
- 3307 124 Liquefied gas, poisonous, oxidizing, n.o.s. (Inhalation Hazard Zone C)
- 3307 124 Liquefied gas, poisonous, oxidizing, n.o.s. (Inhalation Hazard Zone D)

**ID Guide Name of Material  
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- 3307 124 Liquefied gas, toxic, oxidizing, n.o.s.
- 3307 124 Liquefied gas, toxic, oxidizing, n.o.s. (Inhalation Hazard Zone A)
- 3307 124 Liquefied gas, toxic, oxidizing, n.o.s. (Inhalation Hazard Zone B)
- 3307 124 Liquefied gas, toxic, oxidizing, n.o.s. (Inhalation Hazard Zone C)
- 3307 124 Liquefied gas, toxic, oxidizing, n.o.s. (Inhalation Hazard Zone D)
- 3308 123 Liquefied gas, poisonous, corrosive, n.o.s.
- 3308 123 Liquefied gas, poisonous, corrosive, n.o.s. (Inhalation Hazard Zone A)
- 3308 123 Liquefied gas, poisonous, corrosive, n.o.s. (Inhalation Hazard Zone B)
- 3308 123 Liquefied gas, poisonous, corrosive, n.o.s. (Inhalation Hazard Zone C)
- 3308 123 Liquefied gas, poisonous, corrosive, n.o.s. (Inhalation Hazard Zone D)
- 3308 123 Liquefied gas, toxic, corrosive, n.o.s.
- 3308 123 Liquefied gas, toxic, corrosive, n.o.s. (Inhalation Hazard Zone A)
- 3308 123 Liquefied gas, toxic, corrosive, n.o.s. (Inhalation Hazard Zone B)
- 3308 123 Liquefied gas, toxic, corrosive, n.o.s. (Inhalation Hazard Zone C)

ID No.	Guide No.	Name of Material	ID No.	Guide No.	Name of Material
3308	123	Liquefied gas, toxic, corrosive, n.o.s. (Inhalation Hazard Zone D)	3310	124	Liquefied gas, poisonous, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone C)
3309	119	Liquefied gas, poisonous, flammable, corrosive, n.o.s.	3310	124	Liquefied gas, poisonous, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone D)
3309	119	Liquefied gas, poisonous, flammable, corrosive, n.o.s. (Inhalation Hazard Zone A)	3310	124	Liquefied gas, toxic, oxidizing, corrosive, n.o.s.
3309	119	Liquefied gas, poisonous, flammable, corrosive, n.o.s. (Inhalation Hazard Zone B)	3310	124	Liquefied gas, toxic, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone A)
3309	119	Liquefied gas, poisonous, flammable, corrosive, n.o.s. (Inhalation Hazard Zone C)	3310	124	Liquefied gas, toxic, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone B)
3309	119	Liquefied gas, poisonous, flammable, corrosive, n.o.s. (Inhalation Hazard Zone D)	3310	124	Liquefied gas, toxic, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone C)
3309	119	Liquefied gas, toxic, flammable, corrosive, n.o.s.	3310	124	Liquefied gas, toxic, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone D)
3309	119	Liquefied gas, toxic, flammable, corrosive, n.o.s. (Inhalation Hazard Zone A)	3311	122	Gas, refrigerated liquid, oxidizing, n.o.s.
3309	119	Liquefied gas, toxic, flammable, corrosive, n.o.s. (Inhalation Hazard Zone B)	3312	115	Gas, refrigerated liquid, flammable, n.o.s.
3309	119	Liquefied gas, toxic, flammable, corrosive, n.o.s. (Inhalation Hazard Zone C)	3313	135	Organic pigments, self-heating
3309	119	Liquefied gas, toxic, flammable, corrosive, n.o.s. (Inhalation Hazard Zone D)	3314	171	Plastic molding compound
3310	124	Liquefied gas, poisonous, oxidizing, corrosive, n.o.s.	3314	171	Plastics moulding compound
3310	124	Liquefied gas, poisonous, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone A)	3315	151	Chemical sample, poisonous liquid
3310	124	Liquefied gas, poisonous, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone B)	3315	151	Chemical sample, poisonous solid
			3315	151	Chemical sample, toxic liquid
			3315	151	Chemical sample, toxic solid
			3316	171	Chemical kit
			3316	171	First aid kit
			3317	113	2-Amino-4,6-dinitrophenol, wetted with not less than 20% water

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3318	125	Ammonia solution, with more than 50% Ammonia
3319	113	Nitroglycerin mixture, desensitized, solid, n.o.s., with more than 2% but not more than 10% Nitroglycerin
3319	113	Nitroglycerin mixture with more than 2% but not more than 10% Nitroglycerin, desensitized
3320	157	Sodium borohydride and Sodium hydroxide solution, with not more than 12% Sodium borohydride and not more than 40% Sodium hydroxide
3321	162	Radioactive material, low specific activity (LSA-II)
3322	162	Radioactive material, low specific activity (LSA-III)
3323	163	Radioactive material, Type C package
3324	165	Radioactive material, low specific activity (LSA-II), fissile
3325	165	Radioactive material, low specific activity (LSA-III), fissile
3326	165	Radioactive material, surface contaminated objects (SCO-I), fissile
3326	165	Radioactive material, surface contaminated objects (SCO-II), fissile
3327	165	Radioactive material, Type A package, fissile
3328	165	Radioactive material, Type B(U) package, fissile
3329	165	Radioactive material, Type B(M) package, fissile
3330	165	Radioactive material, Type C package, fissile

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3331	165	Radioactive material, transported under special arrangement, fissile
3332	164	Radioactive material, Type A package, special form
3333	165	Radioactive material, Type A package, special form, fissile
3334	171	Aviation regulated liquid, n.o.s.
3335	171	Aviation regulated solid, n.o.s.
3336	130	Mercaptan mixture, liquid, flammable, n.o.s.
3336	130	Mercaptans, liquid, flammable, n.o.s.
3337	126	Refrigerant gas R-404A
3338	126	Refrigerant gas R-407A
3339	126	Refrigerant gas R-407B
3340	126	Refrigerant gas R-407C
3341	135	Thiourea dioxide
3342	135	Xanthates
3343	113	Nitroglycerin mixture, desensitized, liquid, flammable, n.o.s., with not more than 30% Nitroglycerin
3344	113	Pentaerythrite tetranitrate mixture, desensitized, solid, n.o.s., with more than 10% but not more than 20% PETN
3345	153	Phenoxyacetic acid derivative pesticide, solid, poisonous
3345	153	Phenoxyacetic acid derivative pesticide, solid, toxic
3346	131	Phenoxyacetic acid derivative pesticide, liquid, flammable, poisonous
3346	131	Phenoxyacetic acid derivative pesticide, liquid, flammable, toxic

ID No.	Guide No.	Name of Material
3347	131	Phenoxyacetic acid derivative pesticide, liquid, poisonous, flammable
3347	131	Phenoxyacetic acid derivative pesticide, liquid, toxic, flammable
3348	153	Phenoxyacetic acid derivative pesticide, liquid, poisonous
3348	153	Phenoxyacetic acid derivative pesticide, liquid, toxic
3349	151	Pyrethroid pesticide, solid, poisonous
3349	151	Pyrethroid pesticide, solid, toxic
3350	131	Pyrethroid pesticide, liquid, flammable, poisonous
3350	131	Pyrethroid pesticide, liquid, flammable, toxic
3351	131	Pyrethroid pesticide, liquid, poisonous, flammable
3351	131	Pyrethroid pesticide, liquid, toxic, flammable
3352	151	Pyrethroid pesticide, liquid, poisonous
3352	151	Pyrethroid pesticide, liquid, toxic
3353	126	Air bag inflators, compressed gas
3353	126	Air bag modules, compressed gas
3353	126	Seat-belt pre-tensioners, compressed gas
3354	115	Insecticide gas, flammable, n.o.s.
3355	119	Insecticide gas, poisonous, flammable, n.o.s.
3355	119	Insecticide gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone A)
3355	119	Insecticide gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone B)

ID No.	Guide No.	Name of Material
3355	119	Insecticide gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone C)
3355	119	Insecticide gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone D)
3355	119	Insecticide gas, toxic, flammable, n.o.s.
3355	119	Insecticide gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone A)
3355	119	Insecticide gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone B)
3355	119	Insecticide gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone C)
3355	119	Insecticide gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone D)
3356	140	Oxygen generator, chemical
3357	113	Nitroglycerin mixture, desensitized, liquid, n.o.s., with not more than 30% Nitroglycerin
3358	115	Refrigerating machines containing flammable, non-toxic, liquefied gas
8000	171	Consumer commodity
8001	171	Dangerous goods in apparatus
8001	171	Dangerous goods in machinery
8013	171	Gas generator assemblies
8023	115	Refrigerating machines
8027	171	Other regulated substance
8037	140	Oxygen generators, small
8038	171	Heat producing article
9011	133	Camphene
9018	160	Dichlorodifluoroethylene

**ID Guide Name of Material**  
**No. No.**

9026 153 Dinitrocyclohexylphenol  
9035 123 Gas identification set  
9037 151 Hexachloroethane  
9069 132 Tetramethylmethylenediamine  
9073 113 Trinitroaniline, wetted  
9077 153 Adipic acid  
9078 171 Aluminum sulfate, solid  
9078 171 Aluminum sulphate, solid  
9079 171 Ammonium acetate  
9080 171 Ammonium benzoate  
9081 171 Ammonium bicarbonate  
9083 154 Ammonium carbamate  
9084 154 Ammonium carbonate  
9085 171 Ammonium chloride  
9086 143 Ammonium chromate  
9087 171 Ammonium citrate, dibasic  
9088 154 Ammonium fluoborate  
9089 171 Ammonium sulfamate  
9089 171 Ammonium sulphamate  
9090 171 Ammonium sulfite  
9090 171 Ammonium sulphite  
9091 171 Ammonium tartrate  
9094 153 Benzoic acid  
9095 171 n-Butyl phthalate  
9096 171 Calcium chromate  
9097 171 Calcium  
dodecylbenzenesulfonate  
9097 171 Calcium  
dodecylbenzenesulphonate  
9100 171 Chromic sulfate  
9100 171 Chromic sulphate  
9101 171 Chromic acetate  
9102 171 Chromous chloride

**ID Guide Name of Material**  
**No. No.**

9103 171 Cobaltous bromide  
9104 171 Cobaltous formate  
9105 171 Cobaltous sulfamate  
9105 171 Cobaltous sulphamate  
9106 171 Cupric acetate  
9109 171 Cupric sulfate  
9109 171 Cupric sulphate  
9110 171 Cupric sulfate, ammoniated  
9110 171 Cupric sulphate, ammoniated  
9111 171 Cupric tartrate  
9117 171 EDTA  
9117 171 Ethylenediaminetetraacetic acid  
9118 171 Ferric ammonium citrate  
9119 171 Ferric ammonium oxalate  
9120 171 Ferric fluoride  
9121 171 Ferric sulfate  
9121 171 Ferric sulphate  
9122 171 Ferrous ammonium sulfate  
9122 171 Ferrous ammonium sulphate  
9125 171 Ferrous sulfate  
9125 171 Ferrous sulphate  
9126 171 Fumaric acid  
9127 171 Isopropanolamine  
dodecylbenzenesulfonate  
9127 171 Isopropanolamine  
dodecylbenzenesulphonate  
9134 171 Lithium chromate  
9137 171 Naphthenic acid  
9138 171 Nickel ammonium sulfate  
9138 171 Nickel ammonium sulphate  
9139 151 Nickel chloride  
9140 154 Nickel hydroxide  
9141 154 Nickel sulfate

**ID Guide Name of Material**  
**No. No.**

9141 154 Nickel sulphate  
9142 171 Potassium chromate  
9145 171 Sodium chromate  
9146 171 Sodium  
dodecylbenzenesulfonate  
(branched chain)  
9146 171 Sodium  
dodecylbenzenesulphonate  
(branched chain)  
9147 171 Sodium phosphate, dibasic  
9148 171 Sodium phosphate, tribasic  
9149 171 Strontium chromate  
9151 171 Triethanolamine  
dodecylbenzenesulfonate  
9151 171 Triethanolamine  
dodecylbenzenesulphonate  
9153 171 Zinc acetate  
9154 171 Zinc ammonium chloride  
9155 171 Zinc borate  
9156 171 Zinc bromide  
9157 171 Zinc carbonate  
9158 151 Zinc fluoride  
9159 171 Zinc formate  
9160 171 Zinc phenolsulfonate  
9160 171 Zinc phenolsulphonate  
9161 171 Zinc sulfate  
9161 171 Zinc sulphate  
9162 171 Zirconium potassium fluoride  
9163 171 Zirconium sulfate  
9163 171 Zirconium sulphate  
9180 162 Uranyl acetate  
9183 146 Organic peroxide, liquid, n.o.s.  
9183 146 Organic peroxide, solution, n.o.s.  
9187 146 Organic peroxide, solid, n.o.s.

**ID Guide Name of Material**  
**No. No.**

9188 171 Hazardous substance, liquid,  
n.o.s.  
9188 171 Hazardous substance, solid,  
n.o.s.  
9188 171 ORM-E, liquid, n.o.s.  
9188 171 ORM-E, solid, n.o.s.  
9189 171 Hazardous waste, liquid, n.o.s.  
9189 171 Hazardous waste, solid, n.o.s.  
9190 143 Ammonium permanganate  
9191 143 Chlorine dioxide, hydrate, frozen  
9192 167 Fluorine, refrigerated liquid  
(cryogenic liquid)  
9193 140 Oxidizer, corrosive, liquid, n.o.s.  
9194 140 Oxidizer, corrosive, solid, n.o.s.  
9195 135 Metal alkyl, solution, n.o.s.  
9199 142 Oxidizer, poisonous, liquid,  
n.o.s.  
9200 141 Oxidizer, poisonous, solid,  
n.o.s.  
9201 171 Antimony trioxide  
9202 168 Carbon monoxide, refrigerated  
liquid (cryogenic liquid)  
9206 137 Methyl phosphonic dichloride  
9259 128 Elevated temperature material,  
liquid, n.o.s., (at or above  
100°C (212°F) and below its  
flash point)  
9260 169 Aluminum, molten  
9263 156 Chloropivaloyl chloride  
9264 151 3,5-Dichloro-2,4,6-  
trifluoropyridine  
9269 132 Trimethoxysilane  
9274 160 1,1-Dichloro-1-fluoroethane  
9275 158 Regulated medical waste  
9276 128 Flammable liquids, elevated  
temperature material, n.o.s.

**ID Guide Name of Material  
No. No.**

9277	171	Oil, n.o.s., flash point not less than 93°C (200°F)
9278	171	Genetically modified organisms
9301	153	Waste Type 1
9302	153	Waste Type 2
9303	131	Waste Type 3
9304	153	Waste Type 4
9305	131	Waste Type 5
9306	154	Waste Type 6
9307	154	Waste Type 7
9308	153	Waste Type 8
9309	153	Waste Type 9
9310	153	Waste Type 10
9311	153	Waste Type 11
9312	153	Waste Type 12
9313	153	Waste Type 13
9314	153	Waste Type 14
9315	153	Waste Type 15
9316	154	Waste Type 16
9317	154	Waste Type 17
9318	154	Waste Type 18
9319	154	Waste Type 19
9320	154	Waste Type 20
9321	154	Waste Type 21
9322	154	Waste Type 22
9323	154	Waste Type 23
9324	152	Waste Type 24
9325	127	Waste Type 25
9326	152	Waste Type 26
9327	131	Waste Type 27
9328	131	Waste Type 28
9329	153	Waste Type 29
9330	153	Waste Type 30

**ID Guide Name of Material  
No. No.**

9331	129	Waste Type 31
9332	129	Waste Type 32
9333	129	Waste Type 33
9334	129	Waste Type 34
9335	153	Waste Type 35
9336	153	Waste Type 36
9337	153	Waste Type 37
9338	153	Waste Type 38
9339	153	Waste Type 39
9340	153	Waste Type 40
9341	132	Waste Type 41
9342	129	Waste Type 42
9343	154	Waste Type 43
9344	132	Waste Type 44
9345	132	Waste Type 45
9346	153	Waste Type 46
9347	132	Waste Type 47
9348	153	Waste Type 48
9349	153	Waste Type 49
9350	153	Waste Type 50
9351	153	Waste Type 51
9352	153	Waste Type 52
9353	153	Waste Type 53
9354	153	Waste Type 54
9355	153	Waste Type 55
9356	153	Waste Type 56
9357	153	Waste Type 57
9358	153	Waste Type 58
9359	151	Waste Type 59
9360	132	Waste Type 60
9361	151	Waste Type 61
9362	151	Waste Type 62
9363	151	Waste Type 63



**ID Guide Name of Material**  
**No. No.**

**ID Guide Name of Material**  
**No. No.**

9364 151 Waste Type 64  
9365 151 Waste Type 65  
9366 151 Waste Type 66  
9367 152 Waste Type 67  
9368 154 Waste Type 68  
9369 151 Waste Type 69  
9370 151 Waste Type 70  
9371 133 Waste Type 71  
9372 151 Waste Type 72  
9373 151 Waste Type 73  
9374 127 Waste Type 74  
9375 153 Waste Type 75  
9376 153 Waste Type 76  
9377 131 Waste Type 77  
9378 153 Waste Type 78  
9379 153 Waste Type 79  
9380 151 Waste Type 80  
9381 154 Waste Type 81  
9382 154 Waste Type 82  
9383 154 Waste Type 83  
9384 151 Waste Type 84  
9385 154 Waste Type 85  
9386 154 Waste Type 86  
9387 154 Waste Type 87  
9388 151 Waste Type 88  
9389 154 Waste Type 89  
9390 154 Waste Type 90  
9391 153 Waste Type 91  
9392 154 Waste Type 92  
9393 153 Waste Type 93  
9394 151 Waste Type 94  
9395 153 Waste Type 95  
9396 151 Waste Type 96

9397 153 Waste Type 97  
9399 137 Waste Type 99  
9400 137 Waste Type 100  
9500 151 Leachable toxic waste

**Note:** If an entry is highlighted in either the yellow-bordered or blue-bordered pages AND THERE IS NO FIRE, go directly to the Table of Initial Isolation and Protective Action Distances (green-bordered pages) and look up the ID number and name of material to obtain initial isolation and protective action distances. IF THERE IS A FIRE, or IF A FIRE IS INVOLVED, go directly to the appropriate guide (orange-bordered pages) and use the evacuation information shown under PUBLIC SAFETY.

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
AC	117	1051	Acetylene tetrabromide	159	2504
Accumulators, pressurized, pneumatic or hydraulic	126	1956	Acetyl iodide	156	1898
Acetal	127	1088	Acetyl methyl carbinol	127	2621
Acetaldehyde	129	1089	Acetyl peroxide	148	2084
Acetaldehyde ammonia	171	1841	Acid, liquid, n.o.s.	154	1760
Acetaldehyde oxime	129	2332	Acid, sludge	153	1906
Acetic acid, glacial	132	2789	Acid butyl phosphate	153	1718
Acetic acid, solution, more than 10% but not more than 80% acid	153	2790	Acridine	153	2713
Acetic acid, solution, more than 80% acid	132	2789	Acrolein, inhibited	131P	1092
Acetic anhydride	137	1715	Acrolein dimer, stabilized	129P	2607
Acetone	127	1090	Acrylamide	153P	2074
Acetone cyanohydrin, stabilized	155	1541	Acrylic acid, inhibited	132P	2218
Acetone oils	127	1091	Acrylonitrile, inhibited	131P	1093
Acetonitrile	131	1648	Adamsite	154	1698
Acetyl acetone peroxide	145	2080	Adhesives (flammable)	128	1133
Acetyl benzoyl peroxide	147	2081	Adipic acid	153	9077
Acetyl bromide	156	1716	Adiponitrile	153	2205
Acetyl chloride	132	1717	Aerosol dispensers	126	1950
Acetyl cyclohexanesulfonyl peroxide	148	2082	Aerosols	126	1950
Acetyl cyclohexanesulfonyl peroxide	148	2083	Air, compressed	122	1002
Acetyl cyclohexanesulphonyl peroxide	148	2082	Air, refrigerated liquid (cryogenic liquid)	122	1003
Acetyl cyclohexanesulphonyl peroxide	148	2083	Air, refrigerated liquid (cryogenic liquid), non-pressurized	122	1003
Acetylene	116	1001	Air bag inflators	133	1325
Acetylene, dissolved	116	1001	Air bag inflators	171	3268
Acetylene, Ethylene and Propylene in mixture, refrigerated liquid containing at least 71.5% Ethylene with not more than 22.5% Acetylene and not more than 6% Propylene	116	3138	Air bag inflators, compressed gas	126	3353
			Air bag inflators, pyrotechnic	171	3268
			Air bag modules	133	1325
			Air bag modules	171	3268
			Air bag modules, compressed gas	126	3353
			Air bag modules, pyrotechnic	171	3268
			Aircraft evacuation slides	171	2990
			Aircraft hydraulic power unit fuel tank	131	3165

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Aircraft survival kits	171	3072	Alkaline earth metal dispersion	138	1391
Alcoholates solution, n.o.s., in alcohol	127	3274	Alkaline liquid, n.o.s.	154	1719
Alcoholic beverages	127	3065	Alkaloids, liquid, n.o.s. (poisonous)	151	3140
Alcohols, flammable, poisonous, n.o.s.	131	1986	Alkaloids, solid, n.o.s. (poisonous)	151	1544
Alcohols, flammable, toxic, n.o.s.	131	1986	Alkaloid salts, liquid, n.o.s. (poisonous)	151	3140
Alcohols, n.o.s.	127	1987	Alkaloid salts, solid, n.o.s. (poisonous)	151	1544
Alcohols, poisonous, n.o.s.	131	1986	Alkylamines, n.o.s.	132	2733
Alcohols, toxic, n.o.s.	131	1986	Alkylamines, n.o.s.	132	2734
Aldehydes, flammable, poisonous, n.o.s.	131	1988	Alkylamines, n.o.s.	153	2735
Aldehydes, flammable, toxic, n.o.s.	131	1988	Alkyl phenols, liquid, n.o.s. (including C2-C12 homologues)	153	3145
Aldehydes, n.o.s.	129	1989	Alkyl phenols, solid, n.o.s. (including C2-C12 homologues)	153	2430
Aldehydes, poisonous, n.o.s.	131	1988	Alkyl sulfonic acids, liquid, with more than 5% free Sulfuric acid	153	2584
Aldehydes, toxic, n.o.s.	131	1988	Alkyl sulfonic acids, liquid, with not more than 5% free Sulfuric acid	153	2586
Aldol	153	2839	Alkyl sulfonic acids, solid, with more than 5% free Sulfuric acid	153	2583
Aldrin, liquid	131	2762	Alkyl sulfonic acids, solid, with not more than 5% free Sulfuric acid	153	2585
Aldrin, solid	151	2761	Alkylsulfuric acids	156	2571
Aldrin mixture, dry	151	2761	Alkyl sulphonic acids, liquid, with more than 5% free Sulphuric acid	153	2584
Aldrin mixture, liquid	131	2762	Alkyl sulphonic acids, liquid, with not more than 5% free Sulphuric acid	153	2586
Alkali metal alcoholates, self-heating, corrosive, n.o.s.	136	3206			
Alkali metal alloy, liquid, n.o.s.	138	1421			
Alkali metal amalgam	138	1389			
Alkali metal amalgam, liquid	138	1389			
Alkali metal amalgam, solid	138	1389			
Alkali metal amides	139	1390			
Alkali metal dispersion	138	1391			
Alkaline earth metal alcoholates, n.o.s.	135	3205			
Alkaline earth metal alloy, n.o.s.	138	1393			
Alkaline earth metal amalgam	138	1392			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Alkyl sulphonic acids, solid, with more than 5% free Sulphuric acid	153	2583	Aluminum dross	138	3170
Alkyl sulphonic acids, solid, with not more than 5% free Sulphuric acid	153	2585	Aluminum ferrosilicon powder	139	1395
Alkylsulphuric acids	156	2571	Aluminum hydride	138	2463
Allethrin	151	2902	Aluminum nitrate	140	1438
Allyl acetate	131	2333	Aluminum phosphate, solution	154	1760
Allyl alcohol	131	1098	Aluminum phosphide	139	1397
Allylamine	131	2334	Aluminum phosphide pesticide	157	3048
Allyl bromide	131	1099	Aluminum powder, coated	170	1309
Allyl chloride	131	1100	Aluminum powder, pyrophoric	135	1383
Allyl chlorocarbonate	155	1722	Aluminum powder, uncoated	138	1396
Allyl chloroformate	155	1722	Aluminum processing by-products	138	3170
Allyl ethyl ether	131	2335	Aluminum remelting by-products	138	3170
Allyl formate	131	2336	Aluminum resinate	133	2715
Allyl glycidyl ether	129	2219	Aluminum silicon powder, uncoated	138	1398
Allyl iodide	132	1723	Aluminum smelting by-products	138	3170
Allyl isothiocyanate, inhibited	155	1545	Aluminum sulfate, solid	171	9078
Allyl isothiocyanate, stabilized	155	1545	Aluminum sulfate, solution	154	1760
Allyltrichlorosilane, stabilized	155	1724	Aluminum sulphate, solid	171	9078
Aluminum, molten	169	9260	Aluminum sulphate, solution	154	1760
Aluminum alkyl halides	135	3052	Amines, flammable, corrosive, n.o.s.	132	2733
Aluminum alkyl hydrides	138	3076	Amines, liquid, corrosive, flammable, n.o.s.	132	2734
Aluminum alkyls	135	3051	Amines, liquid, corrosive, n.o.s.	153	2735
Aluminum borohydride	135	2870	Amines, solid, corrosive, n.o.s.	154	3259
Aluminum borohydride in devices	135	2870	2-Amino-4-chlorophenol	151	2673
Aluminum bromide, anhydrous	137	1725	2-Amino-5-diethylaminopentane	153	2946
Aluminum bromide, solution	154	2580	2-Amino-4,6-dinitrophenol, wetted with not less than 20% water	113	3317
Aluminum carbide	138	1394	2-(2-Aminoethoxy)ethanol	154	1760
Aluminum chloride, anhydrous	137	1726	2-(2-Aminoethoxy)ethanol	154	3055
Aluminum chloride, solution	154	2581			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
N-Aminoethylpiperazine	153	2815	Ammonium fluoborate	154	9088
Aminophenols	152	2512	Ammonium fluoride	154	2505
Aminopropyldiethanolamine	154	1760	Ammonium fluorosilicate	151	2854
N-Aminopropylmorpholine	154	1760	Ammonium hydrogendifluoride, solid	154	1727
Aminopyridines	153	2671	Ammonium hydrogendifluoride, solution	154	2817
Ammonia, anhydrous	125	1005	Ammonium hydrogen fluoride, solid	154	1727
Ammonia, anhydrous, liquefied	125	1005	Ammonium hydrogen fluoride, solution	154	2817
Ammonia, solution, with more than 10% but not more than 35% Ammonia	154	2672	Ammonium hydrogen sulfate	154	2506
Ammonia, solution, with more than 35% but not more than 50% Ammonia	125	2073	Ammonium hydrogen sulphate	154	2506
Ammonia solution, with more than 50% Ammonia	125	1005	Ammonium hydrosulfide, solution	132	2683
Ammonia solution, with more than 50% Ammonia	125	3318	Ammonium hydrosulphide, solution	132	2683
Ammonium acetate	171	9079	Ammonium hydroxide	154	2672
Ammonium arsenate	151	1546	Ammonium hydroxide, with more than 10% but not more than 35% Ammonia	154	2672
Ammonium benzoate	171	9080	Ammonium metavanadate	154	2859
Ammonium bicarbonate	171	9081	Ammonium nitrate, liquid (hot concentrated solution)	140	2426
Ammonium bifluoride, solid	154	1727	Ammonium nitrate, with not more than 0.2% combustible substances	140	1942
Ammonium bifluoride, solution	154	2817	Ammonium nitrate, with organic coating	140	1942
Ammonium bisulfite, solid	154	2693	Ammonium nitrate fertilizer, n.o.s.	140	2072
Ammonium bisulfite, solution	154	2693	Ammonium nitrate fertilizer, with not more than 0.4% combustible material	140	2071
Ammonium bisulphite, solid	154	2693	Ammonium nitrate fertilizers	140	2067
Ammonium bisulphite, solution	154	2693	Ammonium nitrate fertilizers	140	2071
Ammonium carbamate	154	9083	Ammonium nitrate fertilizers	140	2072
Ammonium carbonate	154	9084			
Ammonium chloride	171	9085			
Ammonium chromate	143	9086			
Ammonium citrate, dibasic	171	9087			
Ammonium dichromate	141	1439			
Ammonium dinitro-o-cresolate	141	1843			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Ammonium nitrate fertilizers, with Ammonium sulfate	140	2069	Ammunition, tear-producing, non-explosive	159	2017
Ammonium nitrate fertilizers, with Ammonium sulphate	140	2069	Ammunition, toxic, non-explosive	151	2016
Ammonium nitrate fertilizers, with Calcium carbonate	140	2068	Amyl acetates	129	1104
Ammonium nitrate fertilizers, with Phosphate or Potash	143	2070	Amyl acid phosphate	153	2819
Ammonium nitrate-fuel oil mixtures	112	---	Amyl alcohols	129	1105
Ammonium nitrate mixed fertilizers	140	2069	Amylamines	132	1106
Ammonium oxalate	154	2449	Amyl butyrates	130	2620
Ammonium perchlorate	143	1442	Amyl chloride	129	1107
Ammonium permanganate	143	9190	n-Amylene	127	1108
Ammonium persulfate	140	1444	Amyl formates	129	1109
Ammonium persulphate	140	1444	Amyl mercaptan	130	1111
Ammonium picrate, wetted with not less than 10% water	113	1310	n-Amyl methyl ketone	127	1110
Ammonium polysulfide, solution	154	2818	Amyl methyl ketone	127	1110
Ammonium polysulphide, solution	154	2818	Amyl nitrate	140	1112
Ammonium polyvanadate	151	2861	Amyl nitrite	129	1113
Ammonium silicofluoride	151	2854	tert-Amyl peroxy-2-ethylhexanoate	148	2898
Ammonium sulfamate	171	9089	tert-Amyl peroxyneodecanoate	148	2891
Ammonium sulfate nitrate	140	1477	Amyltrichlorosilane	155	1728
Ammonium sulfide, solution	132	2683	Anhydrous ammonia	125	1005
Ammonium sulfite	171	9090	Anhydrous ammonia, liquefied	125	1005
Ammonium sulphamate	171	9089	Aniline	153	1547
Ammonium sulphate nitrate	140	1477	Aniline hydrochloride	153	1548
Ammonium sulphide, solution	132	2683	Anisidines	153	2431
Ammonium sulphite	171	9090	Anisidines, liquid	153	2431
Ammonium sulphamate	171	9089	Anisidines, solid	153	2431
Ammonium sulphate nitrate	140	1477	Anisole	127	2222
Ammonium sulphide, solution	132	2683	Anisoyl chloride	156	1729
Ammonium sulphite	171	9090	Antimony compound, inorganic, liquid, n.o.s.	157	3141
Ammonium tartrate	171	9091	Antimony compound, inorganic, n.o.s.	157	1549

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Antimony compound, inorganic, solid, n.o.s.	157	1549	Arsenical pesticide, liquid, poisonous, flammable	131	2993
Antimony lactate	151	1550	Arsenical pesticide, liquid, toxic	151	2994
Antimony pentachloride, liquid	157	1730	Arsenical pesticide, liquid, toxic, flammable	131	2993
Antimony pentachloride, solution	157	1731	Arsenical pesticide, solid, poisonous	151	2759
Antimony pentafluoride	157	1732	Arsenical pesticide, solid, toxic	151	2759
Antimony potassium tartrate	151	1551	Arsenic bromide	151	1555
Antimony powder	170	2871	Arsenic chloride	157	1560
Antimony sulfide, solid	133	1325	Arsenic compound, liquid, n.o.s.	152	1556
Antimony sulphide, solid	133	1325	Arsenic compound, liquid, n.o.s., inorganic	152	1556
Antimony tribromide, solid	157	1549	Arsenic compound, solid, n.o.s.	152	1557
Antimony tribromide, solution	157	1549	Arsenic compound, solid, n.o.s., inorganic	152	1557
Antimony trichloride	157	1733	Arsenic iodide, solid	152	1557
Antimony trichloride, liquid	157	1733	Arsenic pentoxide	151	1559
Antimony trichloride, solid	157	1733	Arsenic sulfide	152	1557
Antimony trichloride, solution	157	1733	Arsenic sulphide	152	1557
Antimony trifluoride, solid	157	1549	Arsenic trichloride	157	1560
Antimony trifluoride, solution	157	1549	Arsenic trioxide	151	1561
Antimony trioxide	171	9201	Arsenic trisulfide	152	1557
Aqua regia	157	1798	Arsenic trisulphide	152	1557
Argon	121	1006	Arsine	119	2188
Argon, compressed	121	1006	Articles containing Polychlorinated biphenyls (PCB)	171	2315
Argon, refrigerated liquid (cryogenic liquid)	120	1951	Articles, pressurized, hydraulic (containing non-flammable gas)	126	3164
Arsenic	152	1558	Articles, pressurized, pneumatic (containing non-flammable gas)	126	3164
Arsenic acid, liquid	154	1553	Aryl sulfonic acids, liquid, with more than 5% free Sulfuric acid	153	2584
Arsenic acid, solid	154	1554			
Arsenical dust	152	1562			
Arsenical pesticide, liquid, flammable, poisonous	131	2760			
Arsenical pesticide, liquid, flammable, toxic	131	2760			
Arsenical pesticide, liquid, poisonous	151	2994			



Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Aryl sulfonic acids, liquid, with not more than 5% free Sulfuric acid	153	2586	1,1'-Azodi-(hexahydrobenzotrile)	149	2954
Aryl sulfonic acids, solid, with more than 5% free Sulfuric acid	153	2583	Azodiisobutyronitrile	150	2952
Aryl sulfonic acids, solid, with not more than 5% free Sulfuric acid	153	2585	2,2'-Azodi-(2-methyl-butyronitrile)	150	3030
Aryl sulphonic acids, liquid, with more than 5% free Sulphuric acid	153	2584	Barium	138	1400
Aryl sulphonic acids, liquid, with not more than 5% free Sulphuric acid	153	2586	Barium alloys, pyrophoric	135	1854
Aryl sulphonic acids, solid, with more than 5% free Sulphuric acid	153	2583	Barium azide, wetted with not less than 50% water	113	1571
Aryl sulphonic acids, solid, with not more than 5% free Sulphuric acid	153	2585	Barium bromate	141	2719
Asbestos	171	2212	Barium chlorate	141	1445
Asbestos, blue	171	2212	Barium chlorate, wet	141	1445
Asbestos, brown	171	2212	Barium compound, n.o.s.	154	1564
Asbestos, white	171	2590	Barium cyanide	157	1565
Asphalt	130	1999	Barium hypochlorite, with more than 22% available Chlorine	141	2741
Asphalt, cut back	130	1999	Barium nitrate	141	1446
Aviation regulated liquid, n.o.s.	171	3334	Barium oxide	157	1884
Aviation regulated solid, n.o.s.	171	3335	Barium perchlorate	141	1447
Azinphos methyl	152	2783	Barium permanganate	141	1448
1-Aziridinyl phosphine oxide (Tris)	152	2501	Barium peroxide	141	1449
Azodicarbonamide	149	3242	Barium selenate	151	2630
2,2'-Azodi-(2,4-dimethyl-4-methoxyvaleronitrile)	150	2955	Barium selenite	151	2630
2,2'-Azodi-(2,4-dimethylvaleronitrile)	150	2953	Batteries, containing Sodium	138	3292
			Batteries, dry, containing Potassium hydroxide, solid	154	3028
			Batteries, wet, filled with acid	154	2794
			Batteries, wet, filled with alkali	154	2795
			Batteries, wet, non-spillable	154	2800
			Battery	154	1813
			Battery	154	2794
			Battery	154	2795
			Battery fluid, acid	157	2796
			Battery fluid, acid, with battery	157	2796

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Battery fluid, acid, with electronic equipment or actuating device	157	2796	Benzoic derivative pesticide, liquid, toxic, flammable	131	3003
Battery fluid, alkali	154	2797	Benzoic derivative pesticide, solid, poisonous	151	2769
Battery fluid, alkali, with battery	154	2797	Benzoic derivative pesticide, solid, toxic	151	2769
Battery fluid, alkali, with electronic equipment or actuating device	154	2797	Benzonitrile	152	2224
Battery-powered equipment (wet battery)	154	3171	Benzoquinone	153	2587
Battery-powered vehicle (wet battery)	154	3171	Benzotrighloride	156	2226
Benzaldehyde	129	1989	Benzotrifluoride	131	2338
Benzaldehyde	129	1990	Benzoyl chloride	137	1736
Benzene	130	1114	Benzoyl peroxide	146	2085
Benzene-1,3-disulfohydrazide	149	2971	Benzoyl peroxide	146	2087
Benzene-1,3-disulphohydrazide	149	2971	Benzoyl peroxide	146	2088
Benzene phosphorus dichloride	137	2798	Benzoyl peroxide	145	2089
Benzene phosphorus thiodichloride	137	2799	Benzoyl peroxide	146	2090
Benzene sulfohydrazide	149	2970	Benzyl bromide	156	1737
Benzenesulfonyl chloride	156	2225	Benzyl chloride	156	1738
Benzene sulphohydrazide	149	2970	Benzyl chloroformate	137	1739
Benzenesulphonyl chloride	156	2225	Benzylidene chloride	156	1886
Benzidine	153	1885	Benzyl iodide	156	2653
Benzoic acid	153	9094	4-[Benzyl(methyl)amino]-3-ethoxybenzenediazonium zinc chloride	150	3038
Benzoic derivative pesticide, liquid, flammable, poisonous	131	2770	Beryllium chloride	154	1566
Benzoic derivative pesticide, liquid, flammable, toxic	131	2770	Beryllium compound, n.o.s.	154	1566
Benzoic derivative pesticide, liquid, poisonous	151	3004	Beryllium fluoride	154	1566
Benzoic derivative pesticide, liquid, poisonous, flammable	131	3003	Beryllium nitrate	141	2464
Benzoic derivative pesticide, liquid, toxic	151	3004	Beryllium powder	134	1567
			Bhusa, wet, damp or contaminated with oil	133	1327

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Bicyclo[2.2.1]hepta-2,5-diene	127P	2251	Blasting agent, n.o.s.	112	—
Bicyclo[2.2.1]hepta-2,5-diene, inhibited	127P	2251	Bleaching powder	140	2208
Bifluorides, n.o.s.	154	1740	Blue asbestos	171	2212
Biological agents	158	—	Bombs, smoke, non-explosive, with corrosive liquid, without initiating device	153	2028
(Bio)Medical waste, n.o.s.	158	3291	Borate and Chlorate mixtures	140	1458
Bipyridilium pesticide, liquid, flammable, poisonous	131	2782	Borneol	133	1312
Bipyridilium pesticide, liquid, flammable, toxic	131	2782	Boron tribromide	157	2692
Bipyridilium pesticide, liquid, poisonous	151	3016	Boron trichloride	125	1741
Bipyridilium pesticide, liquid, poisonous, flammable	131	3015	Boron trifluoride	125	1008
Bipyridilium pesticide, liquid, toxic	151	3016	Boron trifluoride, compressed	125	1008
Bipyridilium pesticide, liquid, toxic, flammable	131	3015	Boron trifluoride, dihydrate	157	2851
Bipyridilium pesticide, solid, poisonous	151	2781	Boron trifluoride acetic acid complex	157	1742
Bipyridilium pesticide, solid, toxic	151	2781	Boron trifluoride diethyl etherate	132	2604
Bis-(2-chloroethyl) ethylamine	153	2810	Boron trifluoride dimethyl etherate	139	2965
Bis-(2-chloroethyl) methylamine	153	2810	Boron trifluoride propionic acid complex	157	1743
Bis-(2-chloroethyl) sulfide	153	2810	Brake fluid, hydraulic	130	1118
Bis-(2-chloroethyl) sulphide	153	2810	Bromates, inorganic, aqueous solution, n.o.s.	140	3213
Bisulfates, aqueous solution	154	2837	Bromates, inorganic, n.o.s.	141	1450
Bisulfites, aqueous solution, n.o.s.	154	2693	Bromine	154	1744
Bisulfites, inorganic, aqueous solutions, n.o.s.	154	2693	Bromine, solution	154	1744
Bisulphates, aqueous solution	154	2837	Bromine chloride	124	2901
Bisulphites, aqueous solution, n.o.s.	154	2693	Bromine pentafluoride	144	1745
Bisulphites, inorganic, aqueous solutions, n.o.s.	154	2693	Bromine trifluoride	144	1746
			Bromoacetic acid	156	1938
			Bromoacetic acid, solid	156	1938
			Bromoacetic acid, solution	156	1938
			Bromoacetone	131	1569
			Bromoacetyl bromide	156	2513

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Bromobenzene	129	2514	Butyl alcohol	129	1120
Bromobenzyl cyanides	159	1694	n-Butylamine	132	1125
1-Bromobutane	129	1126	N-Butylaniline	153	2738
2-Bromobutane	130	2339	Butylbenzenes	128	2709
Bromochlorodifluoromethane	126	1974	n-Butyl bromide	129	1126
Bromochloromethane	160	1887	Butyl chloride	130	1127
1-Bromo-3-chloropropane	159	2688	n-Butyl chloroformate	155	2743
2-Bromoethyl ethyl ether	130	2340	sec-Butyl chloroformate	155	2742
Bromoform	159	2515	tert-Butyl cumene peroxide	145	2091
1-Bromo-3-methylbutane	130	2341	tert-Butyl cumyl peroxide	145	2091
Bromomethylpropanes	130	2342	tert-Butylcyclohexyl chloroformate	156	2747
2-Bromo-2-nitropropane-1,3-diol	133	3241	n-Butyl-4,4-di-(tert-butylperoxy)valerate	146	2140
2-Bromopentane	130	2343	n-Butyl-4,4-di-(tert-butylperoxy)valerate	145	2141
2-Bromopropane	130	2344	Butylene	115	1012
Bromopropanes	130	2344	Butylene	115	1075
3-Bromopropyne	129	2345	1,2-Butylene oxide, stabilized	127P	3022
Bromotrifluoroethylene	116	2419	Butyl ethers	127	1149
Bromotrifluoromethane	126	1009	n-Butyl formate	129	1128
Brown asbestos	171	2212	tert-Butyl hydroperoxide	147	2093
Brucine	152	1570	tert-Butyl hydroperoxide	147	2094
Burnt cotton, not picked	133	1325	tert-Butyl hydroperoxide, not more than 80% in Di-tert-butyl peroxide and/or solvent	147	2092
Butadienes, inhibited	116P	1010	tert-Butyl hypochlorite	135	3255
Butane	115	1011	N,n-Butylimidazole	152	2690
Butane	115	1075	n-Butyl isocyanate	155	2485
Butanedione	127	2346	tert-Butyl isocyanate	155	2484
Butane mixture	115	1011	tert-Butyl isopropyl benzene hydroperoxide	145	2091
Butane mixture	115	1075	Butyl mercaptan	130	2347
Butanols	129	1120	n-Butyl methacrylate	129P	2227
Butoxyl	127	2708			
Butyl acetates	129	1123			
Butyl acid phosphate	153	1718			
Butyl acrylate	129P	2348			
Butyl acrylates, inhibited	129P	2348			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
n-Butyl methacrylate, inhibited	129P	2227	tert-Butyl peroxy pivalate	148	2110
Butyl methyl ether	127	2350	tert-Butyl peroxy-3,5,5-trimethylhexanoate	145	2104
tert-Butyl monoperoxy maleate	146	2099	Butylphenols, liquid	153	2228
Butyl nitrites	129	2351	Butylphenols, solid	153	2229
tert-Butyl peroxyacetate	146	2095	n-Butyl phthalate	171	9095
tert-Butyl peroxyacetate	146	2096	Butyl propionates	130	1914
tert-Butyl peroxybenzoate	146	2097	Butyltoluenes	131	2667
tert-Butyl peroxybenzoate	145	2098	Butyltrichlorosilane	155	1747
tert-Butyl peroxybenzoate	145	2890	5-tert-Butyl-2,4,6-trinitro-m-xylene	149	2956
tert-Butyl peroxy crotonate	145	2183	Butyl vinyl ether, inhibited	127P	2352
Butyl peroxydicarbonate	148	2169	1,4-Butynediol	153	2716
Butyl peroxydicarbonate	148	2170	Butyraldehyde	129	1129
tert-Butyl peroxydiethylacetate	148	2144	Butyraldoxime	129	2840
tert-Butyl peroxydiethylacetate, with tert-Butyl peroxybenzoate	145	2551	Butyric acid	153	2820
tert-Butyl peroxy-2-ethylhexanoate	148	2143	Butyric anhydride	156	2739
tert-Butyl peroxy-2-ethylhexanoate, not more than 50%, with phlegmatizer	148	2888	Butyronitrile	131	2411
tert-Butyl peroxy-2-ethylhexanoate, with 2,2-Di-(tert-butylperoxy)butane	148	2886	Butyryl chloride	132	2353
tert-Butyl peroxy-2-ethylhexanoate, with 2,2-Di-(tert-butylperoxy)butane	145	2887	Buzz	153	2810
tert-Butyl peroxyisobutyrate	148	2142	BZ	153	2810
tert-Butyl peroxyisobutyrate	148	2562	CA	159	1694
tert-Butyl peroxyisononanoate	145	2104	Cacodylic acid	151	1572
tert-Butyl peroxyisopropyl carbonate	146	2103	Cadmium compound	154	2570
tert-Butyl peroxyneodecanoate	148	2177	Caesium	138	1407
tert-Butyl peroxyneodecanoate	148	2594	Caesium hydroxide	157	2682
tert-Butyl peroxy-3-phenylphthalide	145	2596	Caesium hydroxide, solution	154	2681
			Caesium nitrate	140	1451
			Calcium	138	1401
			Calcium, metal and alloys, pyrophoric	135	1855
			Calcium, pyrophoric	135	1855
			Calcium alloys, pyrophoric	135	1855
			Calcium arsenate	151	1573

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Calcium arsenate and Calcium arsenite mixture, solid	151	1574	Calcium hypochlorite mixture, dry, with more than 10% but not more than 39% available Chlorine	140	2208
Calcium arsenite, solid	151	1574	Calcium hypochlorite mixture, dry, with more than 39% available Chlorine (8.8% available Oxygen)	140	1748
Calcium arsenite and Calcium arsenate mixture, solid	151	1574	Calcium manganese silicon	138	2844
Calcium carbide	138	1402	Calcium metal, crystalline	138	1401
Calcium chlorate	140	1452	Calcium nitrate	140	1454
Calcium chlorate, aqueous solution	140	2429	Calcium oxide	157	1910
Calcium chlorate, solution	140	2429	Calcium perchlorate	140	1455
Calcium chlorite	140	1453	Calcium permanganate	140	1456
Calcium chromate	171	9096	Calcium peroxide	140	1457
Calcium cyanamide, with more than 0.1% Calcium carbide	138	1403	Calcium phosphide	139	1360
Calcium cyanide	157	1575	Calcium resinate	133	1313
Calcium dithionite	135	1923	Calcium resinate, fused	133	1314
Calcium dodecylbenzenesulfonate	171	9097	Calcium selenate	151	2630
Calcium dodecylbenzenesulphonate	171	9097	Calcium silicide	138	1405
Calcium hydride	138	1404	Calcium silicon	138	1406
Calcium hydrogen sulfite, solution	154	2693	Camphene	133	9011
Calcium hydrogen sulphite, solution	154	2693	Camphor	133	2717
Calcium hydrosulfite	135	1923	Camphor, synthetic	133	2717
Calcium hydrosulphite	135	1923	Camphor oil	128	1130
Calcium hypochlorite, dry	140	1748	Caproic acid	153	2829
Calcium hypochlorite, hydrated, with not less than 5.5% but not more than 10% water	140	2880	Caprylyl peroxide	148	2129
Calcium hypochlorite, hydrated mixture, with not less than 5.5% but not more than 10% water	140	2880	Caprylyl peroxide, solution	148	2129
			Carbamate pesticide, liquid, flammable, poisonous	131	2758
			Carbamate pesticide, liquid, flammable, toxic	131	2758
			Carbamate pesticide, liquid, poisonous	151	2992
			Carbamate pesticide, liquid, poisonous, flammable	131	2991

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Carbamate pesticide, liquid, toxic	151	2992	Carbon dioxide and Oxygen mixture	122	1014
Carbamate pesticide, liquid, toxic, flammable	131	2991	Carbon dioxide and Oxygen mixture, compressed	122	1014
Carbamate pesticide, solid, poisonous	151	2757	Carbon disulfide	131	1131
Carbamate pesticide, solid, toxic	151	2757	Carbon disulphide	131	1131
Carbaryl	151	2757	Carbon monoxide	119	1016
Carbofuran	151	2757	Carbon monoxide, compressed	119	1016
Carbon, activated	133	1362	Carbon monoxide and Hydrogen mixture	119	2600
Carbon, animal or vegetable origin	133	1361	Carbon monoxide and Hydrogen mixture, compressed	119	2600
Carbon bisulfide	131	1131	Carbon monoxide, refrigerated liquid (cryogenic liquid)	168	9202
Carbon bisulphide	131	1131	Carbon tetrabromide	151	2516
Carbon dioxide	120	1013	Carbon tetrachloride	151	1846
Carbon dioxide, compressed	120	1013	Carbonyl fluoride	125	2417
Carbon dioxide, refrigerated liquid	120	2187	Carbonyl fluoride, compressed	125	2417
Carbon dioxide, solid	120	1845	Carbonyl sulfide	119	2204
Carbon dioxide and Ethylene oxide mixture, with more than 9% but not more than 87% Ethylene oxide	115	1041	Carbonyl sulphide	119	2204
Carbon dioxide and Ethylene oxide mixture, with more than 87% Ethylene oxide	119P	3300	Cargo transport unit under fumigation	171	—
Carbon dioxide and Ethylene oxide mixtures, with more than 6% Ethylene oxide	115	1041	Castor beans, meal, pomace or flake	171	2969
Carbon dioxide and Ethylene oxide mixtures, with not more than 6% Ethylene oxide	126	1952	Caustic alkali liquid, n.o.s.	154	1719
Carbon dioxide and Ethylene oxide mixtures, with not more than 9% Ethylene oxide	126	1952	Caustic potash, dry, solid	154	1813
Carbon dioxide and Nitrous oxide mixture	126	1015	Caustic potash, liquid	154	1814
			Caustic potash, solution	154	1814
			Caustic soda, bead	154	1823
			Caustic soda, flake	154	1823
			Caustic soda, granular	154	1823
			Caustic soda, solid	154	1823
			Caustic soda, solution	154	1824
			Cells, containing Sodium	138	3292

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Celluloid, in blocks, rods, rolls, sheets, tubes, etc., except scrap	133	2000	Chemical kits (containing flammable solids)	133	---
Celluloid, scrap	135	2002	Chemical kits (containing oxidizing substances)	140	---
Cement (flammable)	128	1133	Chemical kits (containing poisonous liquids)	153	---
Cement, container, linoleum, tile or wallboard, liquid	128	1133	Chemical kits (containing poisonous solids)	154	---
Cement, leather	128	1133	Chemical kits (containing toxic liquids)	153	---
Cement, liquid, n.o.s.	128	1133	Chemical kits (containing toxic solids)	154	---
Cement, pyroxylin	128	1133	Chemical sample, poisonous liquid	151	3315
Cement, roofing, liquid	128	1133	Chemical sample, poisonous solid	151	3315
Cement, rubber	128	1133	Chemical sample, toxic liquid	151	3315
Cerium, slabs, ingots or rods	170	1333	Chemical sample, toxic solid	151	3315
Cerium, turnings or gritty powder	138	3078	Chloral, anhydrous, inhibited	153	2075
Cesium	138	1407	Chlorate, n.o.s., wet	140	1461
Cesium hydroxide	157	2682	Chlorate and Borate mixtures	140	1458
Cesium hydroxide, solution	154	2681	Chlorate and Magnesium chloride mixture	140	1459
Cesium nitrate	140	1451	Chlorates, inorganic, aqueous solution, n.o.s.	140	3210
CG	125	1076	Chlorates, inorganic, n.o.s.	140	1461
Charcoal	133	1361	Chloric acid	140	2626
Charcoal, briquettes	133	1361	Chloric acid, aqueous solution, with not more than 10% Chloric acid	140	2626
Charcoal, shell	133	1361	Chlorine	124	1017
Charcoal, wood, ground, crushed, granulated or pulverized	133	1361	Chlorine dioxide, hydrate, frozen	143	9191
Charcoal screenings, made from "Pinon" wood	133	1361	Chlorine pentafluoride	124	2548
Charcoal screenings, other than "Pinon" wood screenings	133	1361	Chlorine trifluoride	124	1749
Chemical kit	154	1760	Chlorite solution	154	1908
Chemical kit	171	3316			
Chemical kits (containing corrosive substances)	154	---			
Chemical kits (containing flammable liquids)	128	---			



Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Chlorite solution, with more than 5% available Chlorine	154	1908	1-Chloro-1,1-difluoroethane	115	2517
Chlorites, inorganic, n.o.s.	143	1462	Chlorodifluoroethanes	115	2517
Chloroacetaldehyde	153	2232	Chlorodifluoromethane	126	1018
Chloroacetic acid, liquid	153	1750	Chlorodifluoromethane and Chloropentafluoroethane mixture	126	1973
Chloroacetic acid, molten	153	3250	Chlorodinitrobenzenes	153	1577
Chloroacetic acid, solid	153	1751	1-Chloro-2,3-epoxypropane	131P	2023
Chloroacetic acid, solution	153	1750	2-Chloroethanal	153	2232
Chloroacetone, stabilized	131	1695	Chloroform	151	1888
Chloroacetonitrile	131	2668	Chloroformates, n.o.s.	155	2742
Chloroacetophenone	153	1697	Chloroformates, poisonous, corrosive, flammable, n.o.s.	155	2742
Chloroacetophenone, liquid	153	1697	Chloroformates, poisonous, corrosive, n.o.s.	154	3277
Chloroacetophenone, solid	153	1697	Chloroformates, toxic, corrosive, flammable, n.o.s.	155	2742
Chloroacetyl chloride	156	1752	Chloroformates, toxic, corrosive, n.o.s.	154	3277
Chloroanilines, liquid	152	2019	1-Chloroheptane	129	—
Chloroanilines, solid	152	2018	1-Chlorohexane	129	—
Chloroanisidines	152	2233	Chloromethyl chloroformate	157	2745
Chlorobenzene	130	1134	Chloromethyl ethyl ether	131	2354
Chlorobenzotrifluorides	130	2234	3-Chloro-4-methylphenyl isocyanate	156	2236
p-Chlorobenzoyl peroxide	146	2113	Chloronitroanilines	153	2237
p-Chlorobenzoyl peroxide	145	2114	Chloronitrobenzenes	152	1578
p-Chlorobenzoyl peroxide	145	2115	Chloronitrobenzenes, liquid	152	1578
Chlorobenzyl chlorides	153	2235	Chloronitrobenzenes, solid	152	1578
o-Chlorobenzylidene malonitrile	153	2810	Chloronitrotoluenes	152	2433
1-Chloro-3-bromopropane	159	2688	Chloronitrotoluenes, liquid	152	2433
Chlorobutanes	130	1127	Chloronitrotoluenes, solid	152	2433
Chlorocresols	152	2669	Chloropentafluoroethane	126	1020
Chlorocresols, liquid	152	2669	Chloropentafluoroethane and Chlorodifluoromethane mixture	126	1973
Chlorocresols, solid	152	2669			
3-Chloro-4-diethylamino-benzenediazonium zinc chloride	149	3033			
Chlorodifluorobromomethane	126	1974			

Name of Material	Gulde No.	ID No.	Name of Material	Gulde No.	ID No.
3-Chloroperoxybenzoic acid	146	2755	Chlorosilanes, n.o.s.	155	2985
Chlorophenates, liquid	154	2904	Chlorosilanes, n.o.s.	155	2986
Chlorophenates, solid	154	2905	Chlorosilanes, n.o.s.	156	2987
Chlorophenolates, liquid	154	2904	Chlorosilanes, n.o.s.	139	2988
Chlorophenolates, solid	154	2905	Chlorosilanes, water-reactive, flammable, corrosive, n.o.s.	139	2988
Chlorophenols, liquid	153	2021	Chlorosulfonic acid	137	1754
Chlorophenols, solid	153	2020	Chlorosulfonic acid and Sulfur trioxide mixture	137	1754
Chlorophenyltrichlorosilane	156	1753	Chlorosulphonic acid	137	1754
Chloropicrin	154	1580	Chlorosulphonic acid and Sulphur trioxide mixture	137	1754
Chloropicrin, absorbed	154	1583	1-Chloro-1,2,2,2-tetrafluoroethane	126	1021
Chloropicrin and Methyl bromide mixture	123	1581	Chlorotetrafluoroethane	126	1021
Chloropicrin and Methyl chloride mixture	119	1582	Chlorotetrafluoroethane and Ethylene oxide mixture, with not more than 8.8% Ethylene oxide	126	3297
Chloropicrin and non-flammable, non-liquefied compressed gas mixture	123	1955	Chlorotoluenes	130	2238
Chloropicrin mixture, flammable	131	2929	4-Chloro-o-toluidine hydrochloride	153	1579
Chloropicrin mixture, n.o.s.	154	1583	Chlorotoluidines	153	2239
Chloropivaloyl chloride	156	9263	Chlorotoluidines, liquid	153	2239
Chloroplatinic acid, solid	154	2507	Chlorotoluidines, solid	153	2239
Chloroprene, inhibited	131P	1991	1-Chloro-2,2,2-trifluoroethane	126	1983
1-Chloropropane	129	1278	Chlorotrifluoroethane	126	1983
2-Chloropropane	129	2356	Chlorotrifluoromethane	126	1022
3-Chloropropanol-1	153	2849	Chlorotrifluoromethane and Trifluoromethane azeotropic mixture with approximately 60% Chlorotrifluoromethane	126	2599
2-Chloropropene	130P	2456	Chlorpyrifos	152	2783
2-Chloropropionic acid	153	2511	Chromic acetate	171	9101
alpha-Chloropropionic acid	153	2511	Chromic acid, solid	141	1463
2-Chloropyridine	153	2822	Chromic acid, solution	154	1755
Chlorosilanes, corrosive, flammable, n.o.s.	155	2986			
Chlorosilanes, corrosive, n.o.s.	156	2987			
Chlorosilanes, flammable, corrosive, n.o.s.	155	2985			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Chromic acid mixture, dry	141	1463	Combustible liquid, n.o.s.	128	1993
Chromic fluoride, solid	154	1756	Compound, cleaning liquid (containing Hydrochloric (muriatic) acid)	157	1789
Chromic fluoride, solution	154	1757	Compound, cleaning liquid (containing Hydrofluoric acid)	157	1790
Chromic sulfate	171	9100	Compound, rust preventing (corrosive)	154	1760
Chromic sulphate	171	9100	Compound, rust removing (corrosive)	154	1760
Chromium nitrate	141	2720	Compound, tree or weed killing, liquid (corrosive)	154	1760
Chromium oxychloride	137	1758	Compound, tree or weed killing, liquid (flammable)	128	1993
Chromium trioxide, anhydrous	141	1463	Compound, tree or weed killing, liquid (toxic)	153	2810
Chromosulfuric acid	154	2240	Compound, tree or weed killing, solid (oxidizer)	140	1479
Chromosulphuric acid	154	2240	Compound, vulcanizing, liquid (corrosive)	154	1760
Chromous chloride	171	9102	Compound, vulcanizing, liquid (flammable)	127	1142
Cigarette lighter, with flammable gas	115	1057	Compounds, cleaning, liquid (corrosive)	154	1760
Cigarette lighter, with flammable liquid	127	1226	Compounds, cleaning, liquid (flammable)	128	1993
Cigarettes, self-lighting	133	1867	Compounds, polishing, liquid, etc. (flammable)	127	1142
CK	125	1589	Compressed gas, flammable, n.o.s.	115	1954
Clinical waste, unspecified, n.o.s.	158	3291	Compressed gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone A)	119	1953
CN	153	1697	Compressed gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone B)	119	1953
Coal gas	119	1023	Compressed gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone C)	119	1953
Coal gas, compressed	119	1023			
Coal tar distillate	128	1137			
Coal tar distillates, flammable	128	1136			
Coal tar dye, liquid	154	2801			
Coating solution	127	1139			
Cobalt naphthenates, powder	133	2001			
Cobaltous bromide	171	9103			
Cobaltous formate	171	9104			
Cobaltous sulfamate	171	9105			
Cobaltous sulphamate	171	9105			
Cobalt resinate, precipitated	133	1318			
Cocculus	151	1584			
Collodion	127	2059			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Compressed gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone D)	119	1953	Compressed gas, poisonous, flammable, corrosive, n.o.s. (Inhalation Hazard Zone C)	119	3305
Compressed gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone A)	119	1953	Compressed gas, poisonous, flammable, corrosive, n.o.s. (Inhalation Hazard Zone D)	119	3305
Compressed gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone B)	119	1953	Compressed gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone A)	119	1953
Compressed gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone C)	119	1953	Compressed gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone B)	119	1953
Compressed gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone D)	119	1953	Compressed gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone C)	119	1953
Compressed gas, n.o.s.	126	1956	Compressed gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone D)	119	1953
Compressed gas, oxidizing, n.o.s.	122	3156	Compressed gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone A)	123	1955
Compressed gas, poisonous, corrosive, n.o.s.	123	3304	Compressed gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone B)	123	1955
Compressed gas, poisonous, corrosive, n.o.s. (Inhalation Hazard Zone A)	123	3304	Compressed gas, poisonous, n.o.s. (Inhalation Hazard Zone A)	123	1955
Compressed gas, poisonous, corrosive, n.o.s. (Inhalation Hazard Zone B)	123	3304	Compressed gas, poisonous, n.o.s. (Inhalation Hazard Zone B)	123	1955
Compressed gas, poisonous, corrosive, n.o.s. (Inhalation Hazard Zone C)	123	3304	Compressed gas, poisonous, n.o.s. (Inhalation Hazard Zone C)	123	1955
Compressed gas, poisonous, corrosive, n.o.s. (Inhalation Hazard Zone D)	123	3304	Compressed gas, poisonous, n.o.s. (Inhalation Hazard Zone D)	123	1955
Compressed gas, poisonous, flammable, corrosive, n.o.s.	119	3305	Compressed gas, poisonous, oxidizing, corrosive, n.o.s.	124	3306
Compressed gas, poisonous, flammable, corrosive, n.o.s. (Inhalation Hazard Zone A)	119	3305	Compressed gas, poisonous, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone A)	124	3306
Compressed gas, poisonous, flammable, corrosive, n.o.s. (Inhalation Hazard Zone B)	119	3305			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Compressed gas, poisonous, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone B)	124	3306	Compressed gas, toxic, flammable, corrosive, n.o.s. (Inhalation Hazard Zone A)	119	3305
Compressed gas, poisonous, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone C)	124	3306	Compressed gas, toxic, flammable, corrosive, n.o.s. (Inhalation Hazard Zone B)	119	3305
Compressed gas, poisonous, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone D)	124	3306	Compressed gas, toxic, flammable, corrosive, n.o.s. (Inhalation Hazard Zone C)	119	3305
Compressed gas, poisonous, oxidizing, n.o.s.	124	3303	Compressed gas, toxic, flammable, corrosive, n.o.s. (Inhalation Hazard Zone D)	119	3305
Compressed gas, poisonous, oxidizing, n.o.s. (Inhalation Hazard Zone A)	124	3303	Compressed gas, toxic, flammable, n.o.s.	119	1953
Compressed gas, poisonous, oxidizing, n.o.s. (Inhalation Hazard Zone B)	124	3303	Compressed gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone A)	119	1953
Compressed gas, poisonous, oxidizing, n.o.s. (Inhalation Hazard Zone C)	124	3303	Compressed gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone B)	119	1953
Compressed gas, poisonous, oxidizing, n.o.s. (Inhalation Hazard Zone D)	124	3303	Compressed gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone C)	119	1953
Compressed gas, toxic, corrosive, n.o.s.	123	3304	Compressed gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone D)	119	1953
Compressed gas, toxic, corrosive, n.o.s. (Inhalation Hazard Zone A)	123	3304	Compressed gas, toxic, n.o.s.	123	1955
Compressed gas, toxic, corrosive, n.o.s. (Inhalation Hazard Zone B)	123	3304	Compressed gas, toxic, n.o.s. (Inhalation Hazard Zone A)	123	1955
Compressed gas, toxic, corrosive, n.o.s. (Inhalation Hazard Zone C)	123	3304	Compressed gas, toxic, n.o.s. (Inhalation Hazard Zone B)	123	1955
Compressed gas, toxic, corrosive, n.o.s. (Inhalation Hazard Zone D)	123	3304	Compressed gas, toxic, n.o.s. (Inhalation Hazard Zone C)	123	1955
Compressed gas, toxic, flammable, corrosive, n.o.s.	119	3305	Compressed gas, toxic, n.o.s. (Inhalation Hazard Zone D)	123	1955
			Compressed gas, toxic, oxidizing, corrosive, n.o.s.	124	3306

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Compressed gas, toxic, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone A)	124	3306	Copper based pesticide, liquid, toxic, flammable	131	3009
Compressed gas, toxic, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone B)	124	3306	Copper based pesticide, solid, poisonous	151	2775
Compressed gas, toxic, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone C)	124	3306	Copper based pesticide, solid, toxic	151	2775
Compressed gas, toxic, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone D)	124	3306	Copper chlorate	141	2721
Compressed gas, toxic, oxidizing, n.o.s.	124	3303	Copper chloride	154	2802
Compressed gas, toxic, oxidizing, n.o.s. (Inhalation Hazard Zone A)	124	3303	Copper cyanide	151	1587
Compressed gas, toxic, oxidizing, n.o.s. (Inhalation Hazard Zone B)	124	3303	Copra	135	1363
Compressed gas, toxic, oxidizing, n.o.s. (Inhalation Hazard Zone C)	124	3303	Corrosive liquid, acidic, inorganic, n.o.s.	154	3264
Compressed gas, toxic, oxidizing, n.o.s. (Inhalation Hazard Zone D)	124	3303	Corrosive liquid, acidic, organic, n.o.s.	153	3265
Consumer commodity	171	8000	Corrosive liquid, basic, inorganic, n.o.s.	154	3266
Copper acetoarsenite	151	1585	Corrosive liquid, basic, organic, n.o.s.	153	3267
Copper arsenite	151	1586	Corrosive liquid, flammable, n.o.s.	132	2920
Copper based pesticide, liquid, flammable, poisonous	131	2776	Corrosive liquid, n.o.s.	154	1760
Copper based pesticide, liquid, flammable, toxic	131	2776	Corrosive liquid, oxidizing, n.o.s.	140	3093
Copper based pesticide, liquid, poisonous	151	3010	Corrosive liquid, poisonous, n.o.s.	154	2922
Copper based pesticide, liquid, poisonous, flammable	131	3009	Corrosive liquid, self-heating, n.o.s.	136	3301
Copper based pesticide, liquid, toxic	151	3010	Corrosive liquid, toxic, n.o.s.	154	2922
			Corrosive liquid, water-reactive, n.o.s.	138	3094
			Corrosive liquid, which in contact with water emits flammable gases, n.o.s.	138	3094
			Corrosive solid, acidic, inorganic, n.o.s.	154	3260
			Corrosive solid, acidic, organic, n.o.s.	154	3261

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Corrosive solid, basic, inorganic, n.o.s.	154	3262	Coumarin derivative pesticide, liquid, toxic, flammable	131	3025
Corrosive solid, basic, organic, n.o.s.	154	3263	Coumarin derivative pesticide, solid, poisonous	151	3027
Corrosive solid, flammable, n.o.s.	134	2921	Coumarin derivative pesticide, solid, toxic	151	3027
Corrosive solid, n.o.s.	154	1759	Cresols	153	2076
Corrosive solid, oxidizing, n.o.s.	140	3084	Cresylic acid	153	2022
Corrosive solid, poisonous, n.o.s.	154	2923	Crotonaldehyde, inhibited	131P	1143
Corrosive solid, self-heating, n.o.s.	136	3095	Crotonaldehyde, stabilized	131P	1143
Corrosive solid, toxic, n.o.s.	154	2923	Crotonic acid	153	2823
Corrosive solid, water-reactive, n.o.s.	138	3096	Crotonic acid, liquid	153	2823
Corrosive solid, which in contact with water emits flammable gases, n.o.s.	138	3096	Crotonic acid, solid	153	2823
Cosmetics, liquid, n.o.s.	154	1760	Crotonylene	128	1144
Cosmetics, n.o.s.	133	1325	CS	153	2810
Cosmetics, n.o.s.	140	1479	Cumene	130	1918
Cosmetics, n.o.s.	128	1993	Cumene hydroperoxide	147	2116
Cosmetics, solid, n.o.s.	154	1759	Cupric acetate	171	9106
Cotton	133	1365	Cupric sulfate	171	9109
Cotton, wet	133	1365	Cupric sulfate, ammoniated	171	9110
Cotton waste, oily	133	1364	Cupric sulphate	171	9109
Coumaphos	152	2783	Cupric sulphate, ammoniated	171	9110
Coumarin derivative pesticide, liquid, flammable, poisonous	131	3024	Cupric tartrate	171	9111
Coumarin derivative pesticide, liquid, flammable, toxic	131	3024	Cupriethylenediamine, solution	154	1761
Coumarin derivative pesticide, liquid, poisonous	151	3026	CX	154	2811
Coumarin derivative pesticide, liquid, poisonous, flammable	131	3025	Cyanide solution, n.o.s.	157	1935
Coumarin derivative pesticide, liquid, toxic	151	3026	Cyanides, inorganic, n.o.s.	157	1588
			Cyanides, inorganic, solid, n.o.s.	157	1588
			Cyanogen	119	1026
			Cyanogen, liquefied	119	1026
			Cyanogen bromide	157	1889
			Cyanogen chloride, inhibited	125	1589
			Cyanogen gas	119	1026

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Cyanuric chloride	157	2670	DA	151	1699
Cyclobutane	115	2601	Dangerous goods in apparatus	171	8001
Cyclobutyl chloroformate	155	2744	Dangerous goods in machinery	171	8001
1,5,9-Cyclododecatriene	153	2518	DC	153	2810
Cycloheptane	128	2241	DDT	151	2761
Cycloheptatriene	131	2603	Decaborane	134	1868
Cycloheptene	128	2242	Decahydronaphthalene	130	1147
Cyclohexane	128	1145	n-Decane	128	2247
Cyclohexanethiol	131	3054	Decanoyl peroxide	148	2120
Cyclohexanone	127	1915	Denatured alcohol	127	1987
Cyclohexanone peroxide, not more than 72% as a paste	147	2896	Denatured alcohol (toxic)	131	1986
Cyclohexanone peroxide, not more than 72% in solution	147	2118	Deuterium	115	1957
Cyclohexanone peroxide, not more than 90%, with not less than 10% water	147	2119	Deuterium, compressed	115	1957
Cyclohexene	130	2256	Devices, small, hydrocarbon gas powered, with release device	115	3150
Cyclohexenyltrichlorosilane	156	1762	Diacetone alcohol	129	1148
Cyclohexyl acetate	130	2243	Diacetone alcohol peroxides	148	2163
Cyclohexylamine	132	2357	Diacetyl	127	2346
Cyclohexyl isocyanate	155	2488	Diallylamine	132	2359
Cyclohexyl mercaptan	131	3054	Diallyl ether	131P	2360
Cyclohexyltrichlorosilane	156	1763	4,4'-Diaminodiphenylmethane	153	2651
Cyclooctadiene phosphines	135	2940	Di-n-amylamine	131	2841
Cyclooctadienes	130P	2520	Diazinon	152	2783
Cyclooctatetraene	128P	2358	2-Diazo-1-naphthol-4-sulfochloride	149	3042
Cyclopentane	128	1146	2-Diazo-1-naphthol-4-sulphochloride	149	3042
Cyclopentanol	129	2244	2-Diazo-1-naphthol-5-sulfochloride	149	3043
Cyclopentanone	127	2245	2-Diazo-1-naphthol-5-sulphochloride	149	3043
Cyclopentene	128	2246	Dibenzylchlorosilane	156	2434
Cyclopropane	115	1027	Dibenzyl peroxydicarbonate	148	2149
Cyclopropane, liquefied	115	1027	Diborane	119	1911
Cymenes	130	2046			



Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Diborane, compressed	119	1911	Di-(tert-butylperoxy)phthalate	145	2108
Diborane mixtures	119	1911	2,2-Di-(tert-butylperoxy)-propane	145	2883
Dibromobenzene	129	2711	2,2-Di-(tert-butylperoxy)-propane	145	2884
1,2-Dibromobutan-3-one	154	2648	1,1-Di-(tert-butylperoxy)-3,3,5-trimethyl cyclohexane	146	2145
Dibromochloropropanes	159	2872	1,1-Di-(tert-butylperoxy)-3,3,5-trimethyl cyclohexane	145	2146
Dibromodifluoromethane	171	1941	1,1-Di-(tert-butylperoxy)-3,3,5-trimethyl cyclohexane	145	2147
Dibromomethane	160	2664	Dicetyl peroxydicarbonate	148	2164
Di-n-butylamine	132	2248	Dicetyl peroxydicarbonate, not more than 42%, in water	148	2895
Dibutylaminoethanol	153	2873	Dichloroacetic acid	153	1764
Di-(4-tert-butylcyclohexyl)-peroxydicarbonate	148	2154	1,3-Dichloroacetone	153	2649
Di-(4-tert-butylcyclohexyl)-peroxydicarbonate	148	2894	Dichloroacetyl chloride	156	1765
Dibutyl ethers	127	1149	Dichloroanilines	153	1590
Di-tert-butyl peroxide	145	2102	Dichloroanilines, liquid	153	1590
2,2-Di-(tert-butylperoxy)butane	146	2111	Dichloroanilines, solid	153	1590
1,1-Di-(tert-butylperoxy)-cyclohexane	146	2179	m-Dichlorobenzene	152	—
1,1-Di-(tert-butylperoxy)-cyclohexane	146	2180	o-Dichlorobenzene	152	1591
1,1-Di-(tert-butylperoxy)-cyclohexane	145	2885	p-Dichlorobenzene	152	1592
1,1-Di-(tert-butylperoxy)-cyclohexane	145	2897	2,4-Dichlorobenzoyl peroxide	146	2137
Di-(sec-butyl)peroxydicarbonate	148	2150	2,4-Dichlorobenzoyl peroxide	145	2138
Di-(sec-butyl)peroxydicarbonate	148	2151	2,4-Dichlorobenzoyl peroxide	145	2139
1,3-Di-(2-tert-butylperoxy-isopropyl)benzene and 1,4-Di-(2-tert-butylperoxy-isopropyl)benzene mixtures	145	2112	Dichlorobutene	132	2920
1,4-Di-(2-tert-butylperoxy-isopropyl)benzene and 1,3-Di-(2-tert-butylperoxy-isopropyl)benzene mixtures	145	2112	Dichlorobutene	132	2924
Di-(tert-butylperoxy)phthalate	146	2106	Dichloro-(2-chlorovinyl) arsine	153	2810
Di-(tert-butylperoxy)phthalate	145	2107	2,2'-Dichlorodiethyl ether	152	1916
			Dichlorodifluoroethylene	160	9018
			Dichlorodifluoromethane	126	1028
			Dichlorodifluoromethane and Difluoroethane azeotropic mixture with approximately 74% Dichlorodifluoromethane	126	2602

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Dichlorodifluoromethane and Ethylene oxide mixture, with not more than 12.5% Ethylene oxide	126	3070	Dichlorotetrafluoroethane	126	1958
Dichlorodifluoromethane and Ethylene oxide mixtures, with not more than 12% Ethylene oxide	126	3070	3,5-Dichloro-2,4,6-trifluoropyridine	151	9264
Dichlorodimethyl ether, symmetrical	153	2249	Dichlorvos	152	2783
Dichlorodiphenyltrichloroethane (DDT)	151	2761	Dicumyl peroxide	145	2121
1,1-Dichloroethane	130	2362	Dicycloheptadiene	127P	2251
1,2-Dichloroethylene	130P	1150	Dicyclohexylamine	153	2565
Dichloroethylene	130P	1150	Dicyclohexylammonium nitrite	133	2687
Dichloroethyl ether	152	1916	Dicyclohexyl peroxydicarbonate	148	2152
1,1-Dichloro-1-fluoroethane	160	9274	Dicyclohexyl peroxydicarbonate	148	2153
Dichlorofluoromethane	126	1029	Dicyclopentadiene	129	2048
Dichloroisocyanuric acid, dry	140	2465	2,2-Di-(4,4-di-tert-butyl-peroxycyclohexyl)propane	145	2168
Dichloroisocyanuric acid salts	140	2465	1,2-Di-(dimethylamino)ethane	129	2372
Dichloroisopropyl ether	153	2490	Didymium nitrate	140	1465
Dichloromethane	160	1593	Dieldrin	151	2761
1,1-Dichloro-1-nitroethane	153	2650	Diesel fuel	128	1202
Dichloropentanes	130	1152	Diesel fuel	128	1993
2,4-Dichlorophenoxyacetic acid	152	2765	Diethoxymethane	127	2373
Dichlorophenyl isocyanates	156	2250	2,5-Diethoxy-4-morpholino-benzenediazonium zinc chloride	150	3036
Dichlorophenyltrichlorosilane	156	1766	3,3-Diethoxypropene	127	2374
1,2-Dichloropropane	130	1279	Diethylamine	132	1154
Dichloropropane	130	1279	2-Diethylaminoethanol	132	2686
1,3-Dichloropropanol-2	153	2750	Diethylaminoethanol	132	2686
Dichloropropenes	132	2047	3-Diethylaminopropylamine	132	2684
2,2-Dichloropropionic acid	154	1760	Diethylaminopropylamine	132	2684
Dichlorosilane	119	2189	N,N-Diethylaniline	153	2432
1,2-Dichloro-1,1,2,2-tetrafluoroethane	126	1958	Diethylbenzene	130	2049
			Diethyl carbonate	127	2366
			Diethyldichlorosilane	155	1767
			Diethylenetriamine	154	2079
			Diethyl ether	127	1155

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
N,N-Diethylethylenediamine	132	2685	Diisobutyl ketone	127	1157
Di-(2-ethylhexyl)-peroxydicarbonate	148	2122	Diisobutyryl peroxide	148	2182
Di-(2-ethylhexyl)-peroxydicarbonate	148	2123	Diisooctyl acid phosphate	153	1902
Di-(2-ethylhexyl)phosphoric acid	153	1902	Diisopropylamine	132	1158
Diethyl ketone	127	1156	Diisopropylbenzene hydroperoxide	145	2171
p-Diethylnitrosoaniline	136	—	Diisopropyl ether	127	1159
Diethyl peroxydicarbonate	148	2175	Diisotridecyl peroxydicarbonate	148	2889
Diethyl sulfate	152	1594	Diketene, inhibited	131P	2521
Diethyl sulfide	129	2375	1,1-Dimethoxyethane	127	2377
Diethyl sulphate	152	1594	1,2-Dimethoxyethane	127	2252
Diethyl sulphide	129	2375	Dimethylamine, anhydrous	118	1032
Diethylthiophosphoryl chloride	155	2751	Dimethylamine, aqueous solution	129	1160
Diethylzinc	135	1366	Dimethylamine, solution	129	1160
Difluorochloroethanes	115	2517	2-Dimethylaminoacetonitrile	131	2378
1,1-Difluoroethane	115	1030	4-Dimethylamino-6-(2-dimethylaminoethoxy)toluene-2-diazonium zinc chloride	150	3039
Difluoroethane	115	1030	2-Dimethylaminoethanol	132	2051
Difluoroethane and Dichlorodifluoromethane azeotropic mixture with approximately 74% dichlorodifluoromethane	126	2602	2-Dimethylaminoethyl acrylate	152	3302
1,1-Difluoroethylene	116P	1959	2-Dimethylaminoethyl methacrylate	153P	2522
Difluoromethane	115	3252	Dimethylaminoethyl methacrylate	153P	2522
Difluorophosphoric acid, anhydrous	154	1768	N,N-Dimethylaniline	153	2253
2,2-Dihydroperoxypropane	146	2178	Di-(2-methylbenzoyl)peroxide	148	2593
2,3-Dihydropyran	127	2376	2,3-Dimethylbutane	128	2457
Di-(1-hydroxycyclohexyl)-peroxide	145	2148	1,3-Dimethylbutylamine	132	2379
Diisobutylamine	132	2361	Dimethylcarbamoyl chloride	156	2262
Diisobutylene, isomeric compounds	127	2050	Dimethyl carbonate	129	1161
			Dimethyl chlorothiophosphate	156	2267
			Dimethylcyclohexanes	128	2263
			Dimethylcyclohexylamine	132	2264

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
2,5-Dimethyl-2,5-di-(benzoylperoxy)hexane	146	2172	2,2-Dimethylpropane	115	2044
2,5-Dimethyl-2,5-di-(benzoylperoxy)hexane	145	2173	Dimethyl-N-propylamine	132	2266
2,5-Dimethyl-2,5-di-(tert-butylperoxy)hexane	145	2155	Dimethyl sulfate	156	1595
2,5-Dimethyl-2,5-di-(tert-butylperoxy)hexane	145	2156	Dimethyl sulfide	130	1164
2,5-Dimethyl-2,5-di-(tert-butylperoxy)hexyne-3	146	2158	Dimethyl sulphate	156	1595
2,5-Dimethyl-2,5-di-(tert-butylperoxy)hexyne-3, with not more than 52% Peroxide in inert solid	145	2159	Dimethyl sulphide	130	1164
Dimethyldichlorosilane	155	1162	Dimethyl thiophosphoryl chloride	156	2267
Dimethyldiethoxysilane	127	2380	Dimethylzinc	135	1370
2,5-Dimethyl-2,5-di-(2-ethylhexanoylperoxy)hexane	148	2157	Dimyristyl peroxydicarbonate	148	2595
2,5-Dimethyl-2,5-dihydroperoxy hexane, not more than 82% with water	146	2174	Dimyristyl peroxydicarbonate, not more than 42%, in water	148	2892
Dimethyldioxanes	128	2707	Dinitroanilines	153	1596
Dimethyl disulfide	130	2381	Dinitrobenzenes	152	1597
Dimethyl disulphide	130	2381	Dinitrochlorobenzene	153	1577
Dimethylethanamine	132	2051	Dinitro-o-cresol	153	1598
Dimethyl ether	115	1033	Dinitrocyclohexylphenol	153	9026
N,N-Dimethylformamide	129	2265	Dinitrogen tetroxide	124	1067
Dimethylhexane dihydroperoxide, with 18% or more water	146	2174	Dinitrogen tetroxide, liquefied	124	1067
1,1-Dimethylhydrazine	131	1163	Dinitrogen tetroxide and Nitric oxide mixture	124	1975
1,2-Dimethylhydrazine	131	2382	Dinitrophenol, solution	153	1599
Dimethylhydrazine, symmetrical	131	2382	Dinitrophenol, wetted with not less than 15% water	113	1320
Dimethylhydrazine, unsymmetrical	131	1163	Dinitrophenolates, wetted with not less than 15% water	113	1321
Dimethyl phosphorochloridothioate	156	2267	Dinitroresorcinol, wetted with not less than 15% water	113	1322
			N,N'-Dinitroso-N,N'-dimethyl terephthalamide	149	2973
			N,N'-Dinitrosopentamethylene tetramine	149	2972
			Dinitrotoluenes	152	2038
			Dinitrotoluenes, liquid	152	2038
			Dinitrotoluenes, molten	152	1600
			Dinitrotoluenes, solid	152	2038

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Dioxane	127	1165	Disinfectant, solid, toxic, n.o.s.	151	1601
Dioxolane	127	1166	Disinfectants, corrosive, liquid, n.o.s.	153	1903
Dipentene	128	2052	Disinfectants, liquid, n.o.s. (poisonous)	151	3142
Diphenylamine chloroarsine	154	1698	Disinfectants, solid, n.o.s. (poisonous)	151	1601
Diphenylchloroarsine	151	1699	Disodium trioxosilicate	154	3253
Diphenylchloroarsine, liquid	151	1699	Disodium trioxosilicate, pentahydrate	154	3253
Diphenylchloroarsine, solid	151	1699	Dispersant gas, n.o.s.	126	1078
Diphenylcyanoarsine	153	2810	Dispersant gas, n.o.s. (flammable)	115	1954
Diphenyldichlorosilane	156	1769	Distearyl peroxydicarbonate	145	2592
Diphenylmethane-4,4'-diisocyanate	156	2489	Disulfoton	152	2783
Diphenylmethyl bromide	153	1770	Dithiocarbamate pesticide, liquid, flammable, poisonous	131	2772
Diphenyloxide-4,4'-disulfohydrazide	149	2951	Dithiocarbamate pesticide, liquid, flammable, toxic	131	2772
Diphenyloxide-4,4'-disulphohydrazide	149	2951	Dithiocarbamate pesticide, liquid, poisonous	151	3006
Diphosgene	125	1076	Dithiocarbamate pesticide, liquid, poisonous, flammable	131	3005
Dipicryl sulfide, wetted with not less than 10% water	113	2852	Dithiocarbamate pesticide, liquid, toxic	151	3006
Dipicryl sulphide, wetted with not less than 10% water	113	2852	Dithiocarbamate pesticide, liquid, toxic	151	3006
Dipropylamine	132	2383	Dithiocarbamate pesticide, liquid, toxic, flammable	131	3005
4-Dipropylaminobenzene-diazonium zinc chloride	149	3034	Dithiocarbamate pesticide, solid, poisonous	151	2771
Di-n-propyl ether	127	2384	Dithiocarbamate pesticide, solid, toxic	151	2771
Dipropyl ether	127	2384	Di-(3,5,5-trimethyl-1,2-dioxolanyl-3)peroxide	148	2597
Dipropyl ketone	127	2710	Divinyl ether, inhibited	131P	1167
Di-n-propyl peroxydicarbonate	148	2176	DM	154	1698
Disinfectant, liquid, corrosive, n.o.s.	153	1903	Dodecylbenzenesulfonic acid	153	2584
Disinfectant, liquid, n.o.s.	128	1993	Dodecylbenzenesulphonic acid	153	2584
Disinfectant, liquid, poisonous, n.o.s.	151	3142			
Disinfectant, liquid, toxic, n.o.s.	151	3142			
Disinfectant, solid, poisonous, n.o.s.	151	1601			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Dodecyltrichlorosilane	156	1771	Elevated temperature liquid, flammable, n.o.s., with flash point above 60.5°C (141°F), at or above its flash point	128	3256
DP	125	1076	Elevated temperature liquid, n.o.s., at or above 100°C (212°F) and below its flash point	128	3257
Driers, paint or varnish, liquid, n.o.s.	127	1168	Elevated temperature material, liquid, n.o.s., (at or above 100°C (212°F) and below its flash point)	128	9259
Drugs, liquid, n.o.s.	154	1760	Elevated temperature solid, n.o.s., at or above 240°C (464°F)	171	3258
Drugs, liquid, n.o.s.	153	2810	Endosulfan	151	2761
Drugs, n.o.s.	133	1325	Engine starting fluid	115	1960
Drugs, n.o.s.	140	1479	Engines, internal combustion, flammable gas powered	128	3166
Drugs, n.o.s.	128	1993	Engines, internal combustion, flammable liquid powered	128	3166
Drugs, solid, n.o.s.	154	1759	Engines, internal combustion, including when fitted in machinery or vehicles	128	3166
Drugs, solid, n.o.s.	154	2811	Environmentally hazardous substances, liquid, n.o.s.	171	3082
Dry ice	120	1845	Environmentally hazardous substances, solid, n.o.s.	171	3077
Dye, liquid, corrosive, n.o.s.	154	2801	Epibromohydrin	131	2558
Dye, liquid, poisonous, n.o.s.	151	1602	Epichlorohydrin	131P	2023
Dye, liquid, toxic, n.o.s.	151	1602	1,2-Epoxy-3-ethoxypropane	127	2752
Dye, solid, corrosive, n.o.s.	154	3147	Esters, n.o.s.	127	3272
Dye, solid, poisonous, n.o.s.	151	3143	Etching acid, liquid, n.o.s.	157	1790
Dye, solid, toxic, n.o.s.	151	3143	Ethane	115	1035
Dye intermediate, liquid, corrosive, n.o.s.	154	2801	Ethane, compressed	115	1035
Dye intermediate, liquid, poisonous, n.o.s.	151	1602	Ethane, refrigerated liquid	115	1961
Dye intermediate, liquid, toxic, n.o.s.	151	1602	Ethane-Propane mixture, refrigerated liquid	115	1961
Dye intermediate, solid, corrosive, n.o.s.	154	3147			
Dye intermediate, solid, poisonous, n.o.s.	151	3143			
Dye intermediate, solid, toxic, n.o.s.	151	3143			
ED	151	1892			
EDTA	171	9117			
Elevated temperature liquid, flammable, n.o.s., with flash point above 37.8°C (100°F), at or above its flash point	128	3256			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Ethanol	127	1170	Ethyl 2-chloropropionate	132	2935
Ethanol, solution	127	1170	Ethyl chlorothioformate	155	2826
Ethanolamine	153	2491	Ethyl crotonate	129	1862
Ethanolamine, solution	153	2491	Ethyl cyanoacetate	156	2666
Ethers, n.o.s.	127	3271	Ethyl-3,3-di-(tert-butylperoxy)butyrate	146	2184
Ethion	152	2783	Ethyl-3,3-di-(tert-butylperoxy)butyrate	145	2598
Ethyl acetate	129	1173	Ethyl-3,3-di-(tert-butylperoxy)butyrate, not more than 77% in solution	145	2185
Ethylacetylene, inhibited	116P	2452	Ethylaluminum dichloroarsine	151	1892
Ethyl acrylate, inhibited	129P	1917	Ethylaluminum dichlorosilane	139	1183
Ethyl alcohol	127	1170	O-Ethyl S-(2-diisopropylaminoethyl) methylphosphonothiolate	153	2810
Ethyl alcohol, solution	127	1170	Ethyl N,N-dimethylphosphoramidocyanidate	153	2810
Ethylamine	118	1036	Ethylene	116P	1962
Ethylamine, aqueous solution, with not less than 50% but not more than 70% Ethylamine	132	2270	Ethylene, Acetylene and Propylene in mixture, refrigerated liquid containing at least 71.5% Ethylene with not more than 22.5% Acetylene and not more than 6% Propylene	116	3138
Ethyl amyl ketone	127	2271	Ethylene, compressed	116P	1962
2-Ethylaniline	153	2273	Ethylene, refrigerated liquid (cryogenic liquid)	115	1038
N-Ethylaniline	153	2272	Ethylene chlorohydrin	131	1135
Ethylbenzene	129	1175	Ethylenediamine	132	1604
N-Ethyl-N-benzylaniline	153	2274	Ethylenediaminetetraacetic acid	171	9117
N-Ethylbenzyltoluidines	153	2753	Ethylene dibromide	154	1605
Ethyl borate	129	1176	Ethylene dibromide and Methyl bromide mixture, liquid	151	1647
Ethyl bromide	131	1891	Ethylene dichloride	129	1184
Ethyl bromoacetate	155	1603	Ethylene glycol diethyl ether	127	1153
2-Ethylbutanol	129	2275	Ethylene glycol monobutyl ether	152	2369
2-Ethylbutyl acetate	129	1177			
Ethylbutyl acetate	129	1177			
Ethyl butyl ether	127	1179			
2-Ethylbutyraldehyde	129	1178			
Ethyl butyrate	129	1180			
Ethyl chloride	115	1037			
Ethyl chloroacetate	155	1181			
Ethyl chloroformate	155	1182			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Ethylene glycol monoethyl ether	127	1171	Ethylene oxide and Propylene oxide mixture, with not more than 30% Ethylene oxide	129P	2983
Ethylene glycol monoethyl ether acetate	129	1172	Ethylene oxide and Tetrafluoroethane mixture, with not more than 5.6% Ethylene oxide	126	3299
Ethylene glycol monomethyl ether	127	1188	Ethylene oxide with Nitrogen	119P	1040
Ethylene glycol monomethyl ether acetate	129	1189	Ethyl ether	127	1155
Ethyleneimine, inhibited	131P	1185	Ethyl fluoride	115	2453
Ethylene oxide	119P	1040	Ethyl formate	129	1190
Ethylene oxide and Carbon dioxide mixture, with more than 9% but not more than 87% Ethylene oxide	115	1041	Ethylhexaldehydes	129	1191
Ethylene oxide and Carbon dioxide mixture, with more than 87% Ethylene oxide	119P	3300	2-Ethylhexylamine	132	2276
Ethylene oxide and Carbon dioxide mixtures, with more than 6 % Ethylene oxide	115	1041	2-Ethylhexyl chloroformate	156	2748
Ethylene oxide and Carbon dioxide mixtures, with not more than 6% Ethylene oxide	126	1952	Ethyl isobutyrate	129	2385
Ethylene oxide and Carbon dioxide mixtures, with not more than 9% Ethylene oxide	126	1952	Ethyl isocyanate	155	2481
Ethylene oxide and Chlorotetrafluoroethane mixture, with not more than 8.8% Ethylene oxide	126	3297	Ethyl lactate	129	1192
Ethylene oxide and Dichlorodifluoromethane mixture, with not more than 12.5% Ethylene oxide	126	3070	Ethyl mercaptan	130	2363
Ethylene oxide and Dichlorodifluoromethane mixtures, with not more than 12% Ethylene oxide	126	3070	Ethyl methacrylate	129P	2277
Ethylene oxide and Pentafluoroethane mixture, with not more than 7.9% Ethylene oxide	126	3298	Ethyl methacrylate, inhibited	129P	2277
			Ethyl methyl ether	115	1039
			Ethyl methyl ketone	127	1193
			Ethyl nitrate	128	1993
			Ethyl nitrite, solution	131	1194
			Ethyl orthoformate	129	2524
			Ethyl oxalate	156	2525
			Ethylphenyldichlorosilane	156	2435
			Ethyl phosphonothioic dichloride, anhydrous	154	2927
			Ethyl phosphonous dichloride, anhydrous	135	2845
			Ethyl phosphorodichloridate	154	2927
			1-Ethylpiperidine	132	2386
			Ethyl propionate	129	1195
			2-Ethyl-3-propylacrolein	153	—



Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Ethyl propyl ether	127	2615	Ferrous ammonium sulphate	171	9122
Ethyl silicate	132	1292	Ferrous arsenate	151	1608
Ethylsulfuric acid	156	2571	Ferrous chloride, solid	154	1759
Ethylsulphuric acid	156	2571	Ferrous chloride, solution	154	1760
N-Ethyltoluidines	153	2754	Ferrous metal borings, shavings, turnings or cuttings	170	2793
Ethyltrichlorosilane	155	1196	Ferrous sulfate	171	9125
Etiologic agent, n.o.s.	158	2814	Ferrous sulphate	171	9125
Explosive A	112	---	Fertilizer, ammoniating solution, with free Ammonia	125	1043
Explosive B	112	---	Fiber, animal, synthetic or vegetable, n.o.s., with oil	133	1373
Explosive C	114	---	Fiber, animal or vegetable, n.o.s., burnt, wet or damp	133	1372
Explosives, division 1.1, 1.2, 1.3, 1.5 or 1.6	112	---	Fibers	133	1372
Explosives, division 1.4	114	---	Fibers impregnated with weakly nitrated Nitrocellulose, n.o.s.	133	1353
Extracts, aromatic, liquid	127	1169	Fibres, animal, synthetic or vegetable, n.o.s., with oil	133	1373
Extracts, flavoring, liquid	127	1197	Fibres, animal or vegetable, burnt, wet or damp	133	---
Extracts, flavouring, liquid	127	1197	Fibres, vegetable, dry	133	---
Fabrics, animal, synthetic or vegetable, n.o.s., with oil	133	1373	Fibres impregnated with weakly nitrated Nitrocellulose, n.o.s.	133	1353
Fabrics impregnated with weakly nitrated Nitrocellulose, n.o.s.	133	1353	Film	133	1324
Ferric ammonium citrate	171	9118	Films, nitrocellulose base	133	1324
Ferric ammonium oxalate	171	9119	Fire extinguisher charges, corrosive liquid	154	1774
Ferric arsenate	151	1606	Fire extinguishers with compressed gas	126	1044
Ferric arsenite	151	1607	Fire extinguishers with liquefied gas	126	1044
Ferric chloride	157	1773	Firelighters, solid, with flammable liquid	133	2623
Ferric chloride, anhydrous	157	1773	First aid kit	171	3316
Ferric chloride, solution	154	2582	Fish meal, stabilized	171	2216
Ferric fluoride	171	9120			
Ferric nitrate	140	1466			
Ferric sulfate	171	9121			
Ferric sulphate	171	9121			
Ferrocerium	170	1323			
Ferrosilicon	139	1408			
Ferrous ammonium sulfate	171	9122			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Fish meal, unstabilized	133	1374	Flammable solid, inorganic, n.o.s.	133	3178
Fish meal containing 6% to 12% water	171	2216	Flammable solid, n.o.s.	133	1325
Fish meal containing less than 6% or more than 12% water	133	1374	Flammable solid, organic, molten, n.o.s.	133	3176
Fish scrap, stabilized	171	2216	Flammable solid, organic, n.o.s.	133	1325
Fish scrap, unstabilized	133	1374	Flammable solid, oxidizing, n.o.s.	140	3097
Fish scrap containing 6% to 12% water	171	2216	Flammable solid, poisonous, inorganic, n.o.s.	134	3179
Fish scrap containing less than 6% or more than 12% water	133	1374	Flammable solid, poisonous, n.o.s.	134	2926
Flame retardant compound, liquid (corrosive)	154	1760	Flammable solid, poisonous, organic, n.o.s.	134	2926
Flammable gas in lighter for cigars, cigarettes, etc.	115	1057	Flammable solid, toxic, inorganic, n.o.s.	134	3179
Flammable liquid, corrosive, n.o.s.	132	2924	Flammable solid, toxic, organic, n.o.s.	134	2926
Flammable liquid, n.o.s.	128	1993	Flue dust, poisonous	154	2811
Flammable liquid, poisonous, corrosive, n.o.s.	131	3286	Fluoboric acid	154	1775
Flammable liquid, poisonous, n.o.s.	131	1992	Fluorine	124	1045
Flammable liquid, toxic, corrosive, n.o.s.	131	3286	Fluorine, compressed	124	1045
Flammable liquid, toxic, n.o.s.	131	1992	Fluorine, refrigerated liquid (cryogenic liquid)	167	9192
Flammable liquid preparations, n.o.s.	127	1142	Fluoroacetic acid	154	2642
Flammable liquids, elevated temperature material, n.o.s.	128	9276	Fluoroanilines	153	2941
Flammable solid, corrosive, inorganic, n.o.s.	134	3180	Fluorobenzene	130	2387
Flammable solid, corrosive, n.o.s.	134	2925	Fluoroboric acid	154	1775
Flammable solid, corrosive, organic, n.o.s.	134	2925	Fluorophosphoric acid, anhydrous	154	1776
Flammable solid, inorganic, corrosive, n.o.s.	134	3180	Fluorosilicates, n.o.s.	151	2856
			Fluorosilicic acid	154	1778
			Fluorosulfonic acid	137	1777
			Fluorosulphonic acid	137	1777
			Fluorotoluenes	130	2388

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Fluosilicic acid	154	1778	Gas oil	128	1202
Formaldehyde, solution, flammable	132	1198	Gasoline	128	1203
Formaldehyde, solutions (Formalin)	132	1198	Gas sample, non-pressurized, flammable, n.o.s., not refrigerated liquid	115	3167
Formaldehyde, solutions (Formalin) (corrosive)	132	2209	Gas sample, non-pressurized, poisonous, flammable, n.o.s., not refrigerated liquid	119	3168
Formic acid	153	1779	Gas sample, non-pressurized, poisonous, n.o.s., not refrigerated liquid	123	3169
Fuel, aviation, turbine engine	128	1863	Gas sample, non-pressurized, toxic, flammable, n.o.s., not refrigerated liquid	119	3168
Fuel oil	128	1202	Gas sample, non-pressurized, toxic, n.o.s., not refrigerated liquid	123	3169
Fuel oil	128	1993	GB	153	2810
Fuel oil, no. 1,2,4,5,6	128	1202	GD	153	2810
Fumaric acid	171	9126	Genetically modified micro-organisms	171	3245
Fumaryl chloride	156	1780	Genetically modified organisms	171	9278
Furaldehydes	132P	1199	Germane	119	2192
Furan	127	2389	GF	153	2810
Furfural	132P	1199	Glycerol alpha-monochlorohydrin	153	2689
Furfuraldehydes	132P	1199	Glycidaldehyde	131P	2622
Furfuryl alcohol	153	2874	Grenade, tear gas	159	2017
Furfurylamine	132	2526	Guanidine nitrate	143	1467
Fusee (rail or highway)	133	1325	H	153	2810
Fusel oil	127	1201	Hafnium powder, dry	135	2545
GA	153	2810	Hafnium powder, wetted with not less than 25% water	170	1326
Gallium	172	2803	Halogenated irritating liquid, n.o.s.	159	1610
Gas, refrigerated liquid, flammable, n.o.s.	115	3312	Hay, wet, damp or contaminated with oil	133	1327
Gas, refrigerated liquid, n.o.s.	120	3158			
Gas, refrigerated liquid, oxidizing, n.o.s.	122	3311			
Gas cartridges	115	2037			
Gas drips, hydrocarbon	128	1864			
Gas generator assemblies	171	8013			
Gas identification set	123	9035			
Gasohol	128	1203			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Hazardous substance, liquid, n.o.s.	171	9188	Hexaethyl tetraphosphate and compressed gas mixture	123	1612
Hazardous substance, solid, n.o.s.	171	9188	Hexaethyl tetraphosphate mixture, liquid	152	2783
Hazardous waste, liquid, n.o.s.	171	3082	Hexafluoroacetone	125	2420
Hazardous waste, liquid, n.o.s.	171	9189	Hexafluoroacetone hydrate	151	2552
Hazardous waste, solid, n.o.s.	171	3077	Hexafluoroethane	126	2193
Hazardous waste, solid, n.o.s.	171	9189	Hexafluoroethane, compressed	126	2193
HD	153	2810	Hexafluorophosphoric acid	154	1782
Heater for refrigerator car, liquid fuel type	128	1993	Hexafluoropropylene	126	1858
Heating oil, light	128	1202	Hexafluoropropylene oxide	126	1956
Heat producing article	171	8038	Hexaldehyde	129	1207
Helium	121	1046	Hexamethylenediamine, solid	153	2280
Helium, compressed	121	1046	Hexamethylenediamine, solution	153	1783
Helium, refrigerated liquid (cryogenic liquid)	120	1963	Hexamethylene diisocyanate	156	2281
Helium-Oxygen mixture	122	1980	Hexamethyleneimine	132	2493
Heptafluoropropane	126	3296	Hexamethylenetetramine	133	1328
n-Heptaldehyde	129	3056	3,3,6,6,9,9-Hexamethyl-1,2,4,5-tetraoxacyclononane	146	2165
Heptanes	128	1206	3,3,6,6,9,9-Hexamethyl-1,2,4,5-tetraoxacyclononane	145	2166
n-Heptene	128	2278	3,3,6,6,9,9-Hexamethyl-1,2,4,5-tetraoxacyclononane	145	2167
Hexachloroacetone	153	2661	Hexamine	133	1328
Hexachlorobenzene	152	2729	Hexanes	128	1208
Hexachlorobutadiene	151	2279	Hexanoic acid	154	1760
Hexachlorocyclopentadiene	151	2646	Hexanoic acid	153	2829
Hexachloroethane	151	9037	Hexanols	129	2282
Hexachlorophene	151	2875	1-Hexene	128	2370
Hexadecyltrichlorosilane	156	1781	Hexyltrichlorosilane	156	1784
Hexadiene	130	2458	HL	153	2810
Hexaethyl tetraphosphate	151	1611	HN-1 (nitrogen mustard)	153	2810
Hexaethyl tetraphosphate, liquid	151	1611	HN-2	153	2810
Hexaethyl tetraphosphate, solid	151	1611			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
HN-3	153	2810	Hydrocyanic acid, aqueous solution, with not more than 20% Hydrogen cyanide	154	1613
Hydrazine, anhydrous	132	2029	Hydrocyanic acid, aqueous solutions, with more than 20% Hydrogen cyanide	117	1051
Hydrazine, aqueous solution, with not less than 37% but not more than 64% Hydrazine	153	2030	Hydrocyanic acid, liquefied	117	1051
Hydrazine, aqueous solution, with not more than 37% Hydrazine	152	3293	Hydrofluoric acid	157	1790
Hydrazine, aqueous solutions, with more than 64% Hydrazine	132	2029	Hydrofluoric acid, solution	157	1790
Hydrazine, aqueous solutions, with not more than 64% Hydrazine	153	2030	Hydrofluoric acid and Sulfuric acid mixture	157	1786
Hydrazine hydrate	153	2030	Hydrofluoric acid and Sulphuric acid mixture	157	1786
Hydrides, metal, n.o.s.	138	1409	Hydrofluorosilicic acid	154	1778
Hydriodic acid	154	1787	Hydrofluosilicic acid	154	1778
Hydriodic acid, solution	154	1787	Hydrogen	115	1049
Hydrobromic acid	154	1788	Hydrogen, compressed	115	1049
Hydrobromic acid, solution	154	1788	Hydrogen, refrigerated liquid (cryogenic liquid)	115	1966
Hydrocarbon gas, compressed, n.o.s.	115	1964	Hydrogen and Carbon monoxide mixture	119	2600
Hydrocarbon gas, liquefied, n.o.s.	115	1965	Hydrogen and Carbon monoxide mixture, compressed	119	2600
Hydrocarbon gas mixture, compressed, n.o.s.	115	1964	Hydrogen and Methane mixture, compressed	115	2034
Hydrocarbon gas mixture, liquefied, n.o.s.	115	1965	Hydrogen bromide, anhydrous	125	1048
Hydrocarbon gas refills for small devices, with release device	115	3150	Hydrogen chloride, anhydrous	125	1050
Hydrocarbons, liquid, n.o.s.	128	3295	Hydrogen chloride, refrigerated liquid	125	2186
Hydrochloric acid	157	1789	Hydrogen cyanide, anhydrous, stabilized	117	1051
Hydrochloric acid, mixture	157	1789	Hydrogen cyanide, anhydrous, stabilized (absorbed)	131	1614
Hydrochloric acid, solution	157	1789	Hydrogen cyanide, aqueous solution, with not more than 20% Hydrogen cyanide	154	1613
Hydrocyanic acid, aqueous solution, with less than 5% Hydrogen cyanide	154	1613			

Name of Material	Gulde No.	ID No.	Name of Material	Gulde No.	ID No.
Hydrogen cyanide, solution in alcohol, with not more than 45% Hydrogen cyanide	131	3294	Hypochlorite solution	154	1791
Hydrogen cyanide, stabilized	117	1051	Hypochlorite solution, with more than 5% available Chlorine	154	1791
Hydrogen cyanide, stabilized (absorbed)	131	1614	Hypochlorites, inorganic, n.o.s.	140	3212
Hydrogendifluorides, n.o.s.	154	1740	3,3'-Iminodipropylamine	153	2269
Hydrogen fluoride, anhydrous	125	1052	Infectious substance, affecting animals only	158	2900
Hydrogen iodide, anhydrous	125	2197	Infectious substance, affecting humans	158	2814
Hydrogen peroxide, aqueous solution, stabilized, with more than 60% Hydrogen peroxide	143	2015	Ink, printer's, flammable	129	1210
Hydrogen peroxide, aqueous solution, with not less than 8% but less than 20% Hydrogen peroxide	140	2984	Insecticide, dry, n.o.s.	151	2588
Hydrogen peroxide, aqueous solution, with not less than 20% but not more than 60% Hydrogen peroxide (stabilized as necessary)	140	2014	Insecticide, liquefied gas	126	1968
Hydrogen peroxide, stabilized	143	2015	Insecticide, liquefied gas, containing Poison A or Poison B material	123	1967
Hydrogen peroxide and Peroxyacetic acid mixture, with acid(s), water and not more than 5% Peroxyacetic acid, stabilized	140	3149	Insecticide, liquid, poisonous, n.o.s.	151	2902
Hydrogen selenide, anhydrous	117	2202	Insecticide gas, flammable, n.o.s.	115	1954
Hydrogen sulfide	117	1053	Insecticide gas, flammable, n.o.s.	115	3354
Hydrogen sulfide, liquefied	117	1053	Insecticide gas, n.o.s.	126	1968
Hydrogen sulphide	117	1053	Insecticide gas, poisonous, flammable, n.o.s.	119	3355
Hydrogen sulphide, liquefied	117	1053	Insecticide gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone A)	119	3355
Hydroquinone	153	2662	Insecticide gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone B)	119	3355
3-(2-Hydroxyethoxy)-4-pyrrolidin-1-yl benzene-diazonium zinc chloride	150	3035	Insecticide gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone C)	119	3355
Hydroxylamine sulfate	154	2865	Insecticide gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone D)	119	3355
Hydroxylamine sulphate	154	2865	Insecticide gas, poisonous, n.o.s.	123	1967
			Insecticide gas, toxic, flammable, n.o.s.	119	3355

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Insecticide gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone A)	119	3355	Isobutylene	115	1055
Insecticide gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone B)	119	3355	Isobutylene	115	1075
Insecticide gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone C)	119	3355	Isobutyl formate	132	2393
Insecticide gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone D)	119	3355	Isobutyl isobutyrate	129	2528
Insecticide gas, toxic, n.o.s.	123	1967	Isobutyl isocyanate	155	2486
Iodine monochloride	157	1792	Isobutyl methacrylate	130P	2283
Iodine pentafluoride	144	2495	Isobutyl methacrylate, inhibited	130P	2283
2-Iodobutane	129	2390	Isobutyl propionate	129	2394
Iodomethylpropanes	129	2391	Isobutyl methacrylate, inhibited	130P	2283
Iodopropanes	129	2392	Isobutyl propionate	129	2394
IPDI	156	2290	Isobutyraldehyde	129	2045
Iron oxide, spent	135	1376	Isobutyric acid	132	2529
Iron pentacarbonyl	131	1994	Isobutyric anhydride	132	2530
Iron sponge, spent	135	1376	Isobutyronitrile	131	2284
Irritating agent, n.o.s.	159	1693	Isobutyryl chloride	132	2395
Isobutane	115	1075	Isocyanate solution, flammable, poisonous, n.o.s.	155	2478
Isobutane	115	1969	Isocyanate solution, flammable, toxic, n.o.s.	155	2478
Isobutane mixture	115	1075	Isocyanate solution, poisonous, flammable, n.o.s.	155	3080
Isobutane mixture	115	1969	Isocyanate solution, poisonous, n.o.s.	155	2206
Isobutanol	129	1212	Isocyanate solution, toxic, flammable, n.o.s.	155	3080
Isobutyl acetate	129	1213	Isocyanate solution, toxic, n.o.s.	155	2206
Isobutyl acrylate	130P	2527	Isocyanate solutions, n.o.s.	155	2206
Isobutyl acrylate, inhibited	130P	2527	Isocyanate solutions, n.o.s.	155	2478
Isobutyl alcohol	129	1212	Isocyanate solutions, n.o.s.	155	3080
Isobutyl aldehyde	129	2045	Isocyanate solutions, n.o.s. (toxic)	155	2207
Isobutylamine	132	1214	Isocyanates, flammable, poisonous, n.o.s.	155	2478
Isobutyl chloroformate	155	2742	Isocyanates, flammable, toxic, n.o.s.	155	2478
			Isocyanates, n.o.s.	155	2206
			Isocyanates, n.o.s.	155	2478

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Isocyanates, n.o.s.	155	3080	Isopropyl chloroformate	155	2407
Isocyanates, n.o.s. (toxic)	155	2207	Isopropyl 2-chloropropionate	132	2934
Isocyanates, poisonous, flammable, n.o.s.	155	3080	Isopropyl isobutyrate	131	2406
Isocyanates, poisonous, n.o.s.	155	2206	Isopropyl isocyanate	155	2483
Isocyanates, toxic, flammable, n.o.s.	155	3080	Isopropyl mercaptan	130	2402
Isocyanates, toxic, n.o.s.	155	2206	Isopropyl methylphosphonofluoridate	153	2810
Isocyanatobenzotrifluorides	156	2285	Isopropyl nitrate	130	1222
Isoheptene	128	2287	Isopropyl percarbonate, unstabilized	148	2133
Isohexene	128	2288	Isopropyl peroxydicarbonate	148	2133
Isononanoyl peroxide	148	2128	Isopropyl peroxydicarbonate	148	2134
Isooctane	128	1262	Isopropyl propionate	129	2409
Isooctene	128	1216	Isosorbide dinitrate mixture	133	2907
Isopentane	128	1265	Isosorbide-5-mononitrate	133	3251
Isopentanoic acid	154	1760	Kerosene	128	1223
Isopentenes	128	2371	Ketones, liquid, n.o.s.	127	1224
Isophoronediamine	153	2289	Krypton	121	1056
Isophorone diisocyanate	156	2290	Krypton, compressed	121	1056
Isoprene, inhibited	130P	1218	Krypton, refrigerated liquid (cryogenic liquid)	120	1970
Isopropanol	129	1219	L (Lewisite)	153	2810
Isopropanolamine dodecylbenzenesulfonate	171	9127	Lacquer chips, dry	133	2557
Isopropanolamine dodecylbenzenesulphonate	171	9127	Lauroyl peroxide	145	2124
Isopropenyl acetate	129P	2403	Lauroyl peroxide, not more than 42%, stable dispersion, in water	145	2893
Isopropenylbenzene	128	2303	Leachable toxic waste	151	9500
Isopropyl acetate	129	1220	Lead acetate	151	1616
Isopropyl acid phosphate	153	1793	Lead arsenates	151	1617
Isopropyl alcohol	129	1219	Lead arsenites	151	1618
Isopropylamine	132	1221	Lead chloride	151	2291
Isopropylbenzene	130	1918	Lead compound, soluble, n.o.s.	151	2291
Isopropyl butyrate	129	2405	Lead cyanide	151	1620
Isopropyl chloroacetate	155	2947	Lead dioxide	141	1872



Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Lead fluoborate	151	2291	Liquefied gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone C)	119	1953
Lead fluoride	154	2811	Liquefied gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone D)	119	1953
Lead nitrate	141	1469	Liquefied gas, flammable, toxic, n.o.s.	119	1953
Lead perchlorate	141	1470	Liquefied gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone A)	119	1953
Lead perchlorate, solid	141	1470	Liquefied gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone B)	119	1953
Lead perchlorate, solution	141	1470	Liquefied gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone C)	119	1953
Lead peroxide	141	1872	Liquefied gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone D)	119	1953
Lead phosphite, dibasic	133	2989	Liquefied gas, n.o.s.	126	1956
Lead sulfate, with more than 3% free acid	154	1794	Liquefied gas, n.o.s.	126	3163
Lead sulphate, with more than 3% free acid	154	1794	Liquefied gas, oxidizing, n.o.s.	122	3157
Lewisite	153	2810	Liquefied gas, poisonous, corrosive, n.o.s. (Inhalation Hazard Zone A)	123	3308
Life-saving appliances, not self-inflating	171	3072	Liquefied gas, poisonous, corrosive, n.o.s. (Inhalation Hazard Zone A)	123	3308
Life-saving appliances, self-inflating	171	2990	Liquefied gas, poisonous, corrosive, n.o.s. (Inhalation Hazard Zone B)	123	3308
Lighter refills (cigarettes) (flammable gas)	115	1057	Liquefied gas, poisonous, corrosive, n.o.s. (Inhalation Hazard Zone C)	123	3308
Lighters (cigarettes) (flammable gas)	115	1057	Liquefied gas, poisonous, flammable, corrosive, n.o.s.	119	3309
Lighters for cigars, cigarettes etc. with lighter fluid	127	1226			
Lighters for cigars, cigarettes (flammable liquid)	127	1226			
Lindane	151	2761			
Liquefied gas (nonflammable)	121	1058			
Liquefied gas, flammable, n.o.s.	115	1954			
Liquefied gas, flammable, n.o.s.	115	3161			
Liquefied gas, flammable, poisonous, n.o.s.	119	1953			
Liquefied gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone A)	119	1953			
Liquefied gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone B)	119	1953			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Liquefied gas, poisonous, flammable, corrosive, n.o.s. (Inhalation Hazard Zone A)	119	3309	Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone C)	123	3162
Liquefied gas, poisonous, flammable, corrosive, n.o.s. (Inhalation Hazard Zone B)	119	3309	Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone D)	123	1955
Liquefied gas, poisonous, flammable, corrosive, n.o.s. (Inhalation Hazard Zone C)	119	3309	Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone D)	123	3162
Liquefied gas, poisonous, flammable, corrosive, n.o.s. (Inhalation Hazard Zone D)	119	3309	Liquefied gas, poisonous, oxidizing, corrosive, n.o.s.	124	3310
Liquefied gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone A)	119	3160	Liquefied gas, poisonous, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone A)	124	3310
Liquefied gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone B)	119	3160	Liquefied gas, poisonous, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone B)	124	3310
Liquefied gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone C)	119	3160	Liquefied gas, poisonous, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone C)	124	3310
Liquefied gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone D)	119	3160	Liquefied gas, poisonous, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone D)	124	3310
Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone A)	123	1955	Liquefied gas, poisonous, oxidizing, n.o.s.	124	3307
Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone B)	123	3162	Liquefied gas, poisonous, oxidizing, n.o.s. (Inhalation Hazard Zone A)	124	3307
Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone C)	123	1955	Liquefied gas, poisonous, oxidizing, n.o.s. (Inhalation Hazard Zone B)	124	3307
Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone A)	123	3162	Liquefied gas, poisonous, oxidizing, n.o.s. (Inhalation Hazard Zone C)	124	3307
Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone B)	123	1955	Liquefied gas, poisonous, oxidizing, n.o.s. (Inhalation Hazard Zone D)	124	3307
Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone B)	123	3162	Liquefied gas, toxic, corrosive, n.o.s.	123	3308
Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone C)	123	1955	Liquefied gas, toxic, corrosive, n.o.s. (Inhalation Hazard Zone A)	123	3308

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Liquefied gas, toxic, corrosive, n.o.s. (Inhalation Hazard Zone B)	123	3308	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone A)	123	1955
Liquefied gas, toxic, corrosive, n.o.s. (Inhalation Hazard Zone C)	123	3308	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone A)	123	3162
Liquefied gas, toxic, corrosive, n.o.s. (Inhalation Hazard Zone D)	123	3308	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone B)	123	1955
Liquefied gas, toxic, flammable, corrosive, n.o.s.	119	3309	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone B)	123	3162
Liquefied gas, toxic, flammable, corrosive, n.o.s. (Inhalation Hazard Zone A)	119	3309	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone C)	123	1955
Liquefied gas, toxic, flammable, corrosive, n.o.s. (Inhalation Hazard Zone B)	119	3309	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone D)	123	1955
Liquefied gas, toxic, flammable, corrosive, n.o.s. (Inhalation Hazard Zone C)	119	3309	Liquefied gas, toxic, oxidizing, corrosive, n.o.s.	124	3310
Liquefied gas, toxic, flammable, corrosive, n.o.s. (Inhalation Hazard Zone D)	119	3309	Liquefied gas, toxic, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone A)	124	3310
Liquefied gas, toxic, flammable, n.o.s.	119	3160	Liquefied gas, toxic, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone B)	124	3310
Liquefied gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone A)	119	3160	Liquefied gas, toxic, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone C)	124	3310
Liquefied gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone B)	119	3160	Liquefied gas, toxic, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone D)	124	3310
Liquefied gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone C)	119	3160	Liquefied gas, toxic, oxidizing, n.o.s.	124	3307
Liquefied gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone D)	119	3160	Liquefied gas, toxic, oxidizing, n.o.s. (Inhalation Hazard Zone A)	124	3307
Liquefied gas, toxic, n.o.s.	123	1955	Liquefied gas, toxic, oxidizing, n.o.s. (Inhalation Hazard Zone B)	124	3307
Liquefied gas, toxic, n.o.s.	123	3162			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Liquefied gas, toxic, oxidizing, n.o.s. (Inhalation Hazard Zone C)	124	3307	Lithium hypochlorite mixture	140	1471
Liquefied gas, toxic, oxidizing, n.o.s. (Inhalation Hazard Zone D)	124	3307	Lithium hypochlorite mixtures, dry	140	1471
Liquefied gases, non-flammable, charged with Nitrogen, Carbon dioxide or Air	121	1058	Lithium nitrate	140	2722
Liquefied natural gas (cryogenic liquid)	115	1972	Lithium nitride	138	2806
Liquefied petroleum gas	115	1075	Lithium peroxide	143	1472
Lithium	138	1415	Lithium silicon	138	1417
Lithium acetylide-Ethylenediamine complex	138	2813	LNG (cryogenic liquid)	115	1972
Lithium alkyls	135	2445	London purple	151	1621
Lithium aluminum hydride	138	1410	LPG	115	1075
Lithium aluminum hydride, ethereal	138	1411	Magnesium	138	1869
Lithium amide	139	1412	Magnesium, in pellets, turnings or ribbons	138	1869
Lithium batteries	138	3090	Magnesium alkyls	135	3053
Lithium batteries, liquid or solid cathode	138	3090	Magnesium alloys, with more than 50% Magnesium, in pellets, turnings or ribbons	138	1869
Lithium batteries contained in equipment	138	3091	Magnesium alloys powder	138	1418
Lithium batteries packed with equipment	138	3091	Magnesium aluminum phosphide	139	1419
Lithium borohydride	138	1413	Magnesium arsenate	151	1622
Lithium chromate	171	9134	Magnesium bisulfite solution	154	2693
Lithium ferrosilicon	139	2830	Magnesium bisulphite solution	154	2693
Lithium hydride	138	1414	Magnesium bromate	140	1473
Lithium hydride, fused solid	138	2805	Magnesium chlorate	140	2723
Lithium hydroxide, monohydrate	154	2680	Magnesium chlorate and Chlorate mixture	140	1459
Lithium hydroxide, solid	154	2680	Magnesium diamide	135	2004
Lithium hydroxide, solution	154	2679	Magnesium diphenyl	135	2005
Lithium hypochlorite, dry	140	1471	Magnesium fluorosilicate	151	2853
			Magnesium granules, coated	138	2950
			Magnesium hydride	138	2010
			Magnesium nitrate	140	1474
			Magnesium perchlorate	140	1475
			Magnesium peroxide	140	1476

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Magnesium phosphide	139	2011	Medicines, corrosive, solid, n.o.s.	154	1759
Magnesium powder	138	1418	Medicines, flammable, liquid, n.o.s.	128	1993
Magnesium scrap	138	1869	Medicines, flammable, solid, n.o.s.	133	1325
Magnesium silicide	138	2624	Medicines, oxidizing substances, solid, n.o.s.	140	1479
Magnesium silicofluoride	151	2853	Medicines, poisonous, liquid, n.o.s.	153	2810
Magnetized material	171	2807	Medicines, poisonous, solid, n.o.s.	154	2811
Maleic acid	156	2215	Medicines, toxic, liquid, n.o.s.	153	2810
Maleic anhydride	156	2215	Medicines, toxic, solid, n.o.s.	154	2811
Malononitrile	153	2647	p-Menthane hydroperoxide	147	2125
Maneb	135	2210	Mercaptan mixture, aliphatic	131	1228
Maneb, stabilized	135	2968	Mercaptan mixture, liquid, flammable, n.o.s.	130	3336
Maneb preparation, stabilized	135	2968	Mercaptan mixture, liquid, flammable, poisonous, n.o.s.	131	1228
Maneb preparation, with not less than 60% Maneb	135	2210	Mercaptan mixture, liquid, flammable, toxic, n.o.s.	131	1228
Manganese nitrate	140	2724	Mercaptan mixture, liquid, poisonous, flammable, n.o.s.	131	3071
Manganese resinate	133	1330	Mercaptan mixture, liquid, toxic, flammable, n.o.s.	131	3071
Matches, fusee	133	2254	Mercaptan mixtures, liquid, n.o.s.	131	1228
Matches, safety	133	1944	Mercaptan mixtures, liquid, n.o.s.	131	3071
Matches, "strike anywhere"	133	1331	Mercaptans, liquid, flammable, n.o.s.	130	3336
Matches, wax "vesta"	133	1945	Mercaptans, liquid, flammable, poisonous, n.o.s.	131	1228
MD	152	1556	Mercaptans, liquid, flammable, toxic, n.o.s.	131	1228
Medical waste, n.o.s.	158	3291	Mercaptans, liquid, flammable, toxic, n.o.s.	131	1228
Medicine, liquid, flammable, poisonous, n.o.s.	131	3248	Mercaptans, liquid, n.o.s.	131	3071
Medicine, liquid, flammable, toxic, n.o.s.	131	3248	Mercaptans, liquid, flammable, n.o.s.	131	1228
Medicine, liquid, poisonous, n.o.s.	151	1851	Mercaptans, liquid, flammable, toxic, n.o.s.	131	1228
Medicine, liquid, toxic, n.o.s.	151	1851	Mercaptans, liquid, n.o.s.	131	3071
Medicine, solid, poisonous, n.o.s.	151	3249	Mercaptans, liquid, flammable, n.o.s.	131	1228
Medicine, solid, toxic, n.o.s.	151	3249	Mercaptans, liquid, flammable, toxic, n.o.s.	131	1228
Medicines, corrosive, liquid, n.o.s.	154	1760	Mercaptans, liquid, n.o.s.	131	3071

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Mercaptans, liquid, poisonous, flammable, n.o.s.	131	3071	Mercury based pesticide, solid, toxic	151	2777
Mercaptans, liquid, toxic, flammable, n.o.s.	131	3071	Mercury benzoate	154	1631
Mercuric arsenate	151	1623	Mercury bisulfate	151	1633
Mercuric bromide	154	1634	Mercury bisulphate	151	1633
Mercuric chloride	154	1624	Mercury bromides	154	1634
Mercuric cyanide	154	1636	Mercury compound, liquid, n.o.s.	151	2024
Mercuric nitrate	141	1625	Mercury compound, solid, n.o.s.	151	2025
Mercuric oxycyanide	151	1642	Mercury cyanide	154	1636
Mercuric potassium cyanide	157	1626	Mercury gluconate	151	1637
Mercuric sulfate	151	1645	Mercury iodide	151	1638
Mercuric sulphate	151	1645	Mercury metal	172	2809
Mercurous bromide	154	1634	Mercury nucleate	151	1639
Mercurous nitrate	141	1627	Mercury oleate	151	1640
Mercurous sulfate	151	1628	Mercury oxide	151	1641
Mercurous sulphate	151	1628	Mercury oxycyanide, desensitized	151	1642
Mercury	172	2809	Mercury potassium iodide	151	1643
Mercury, metallic	172	2809	Mercury salicylate	151	1644
Mercury acetate	151	1629	Mercury sulfate	151	1645
Mercury ammonium chloride	151	1630	Mercury sulphate	151	1645
Mercury based pesticide, liquid, flammable, poisonous	131	2778	Mercury thiocyanate	151	1646
Mercury based pesticide, liquid, flammable, toxic	131	2778	Mesityl oxide	129	1229
Mercury based pesticide, liquid, poisonous	151	3012	Metal alkyl, solution, n.o.s.	135	9195
Mercury based pesticide, liquid, poisonous, flammable	131	3011	Metal alkyl halides, n.o.s.	138	3049
Mercury based pesticide, liquid, toxic	151	3012	Metal alkyl halides, water-reactive, n.o.s.	138	3049
Mercury based pesticide, liquid, toxic, flammable	131	3011	Metal alkyl hydrides, n.o.s.	138	3050
Mercury based pesticide, solid, poisonous	151	2777	Metal alkyl hydrides, water-reactive, n.o.s.	138	3050
			Metal alkyls, n.o.s.	135	2003
			Metal alkyls, water-reactive, n.o.s.	135	2003
			Metal aryl halides, n.o.s.	138	3049

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Metal aryl halides, water-reactive, n.o.s.	138	3049	Methanesulphonyl chloride	156	3246
Metal aryl hydrides, n.o.s.	138	3050	Methanol	131	1230
Metal aryl hydrides, water-reactive, n.o.s.	138	3050	Methoxymethyl isocyanate	155	2605
Metal aryls, n.o.s.	135	2003	4-Methoxy-4-methyl-pentan-2-one	127	2293
Metal aryls, water-reactive, n.o.s.	135	2003	1-Methoxy-2-propanol	129	3092
Metal carbonyls, n.o.s.	151	3281	Methyl acetate	129	1231
Metal catalyst, dry	135	2881	Methyl acetone	127	1232
Metal catalyst, wetted	170	1378	Methylacetylene and Propadiene mixture, stabilized	116P	1060
Metaldehyde	133	1332	Methyl acrylate, inhibited	129P	1919
Metal hydrides, flammable, n.o.s.	170	3182	Methylal	127	1234
Metal hydrides, water-reactive, n.o.s.	138	1409	Methyl alcohol	131	1230
Metallic substance, water-reactive, n.o.s.	138	3208	Methylallyl chloride	129P	2554
Metallic substance, water-reactive, self-heating, n.o.s.	138	3209	Methylamine, anhydrous	118	1061
Metal powder, flammable, n.o.s.	170	3089	Methylamine, aqueous solution	132	1235
Metal powder, self-heating, n.o.s.	135	3189	Methylamyl acetate	129	1233
Metal salts of organic compounds, flammable, n.o.s.	133	3181	Methylamyl alcohol	129	2053
Methacrylaldehyde	131P	2396	Methyl amyl ketone	127	1110
Methacrylaldehyde, inhibited	131P	2396	N-Methylaniline	153	2294
Methacrylic acid, inhibited	153P	2531	Methyl benzoate	152	2938
Methacrylonitrile, inhibited	131P	3079	alpha-Methylbenzyl alcohol	153	2937
Methallyl alcohol	129	2614	Methylbenzyl alcohol (alpha)	153	2937
Methane	115	1971	Methyl bromide	123	1062
Methane, compressed	115	1971	Methyl bromide and Chloropicrin mixtures	123	1581
Methane, refrigerated liquid (cryogenic liquid)	115	1972	Methyl bromide and Ethylene dibromide mixture, liquid	151	1647
Methane and Hydrogen mixture, compressed	115	2034	Methyl bromide and more than 2% Chloropicrin mixture, liquid	123	1581
Methanesulfonyl chloride	156	3246	Methyl bromide and nonflammable, nonliquefied compressed gas mixture	123	1955

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Methyl bromoacetate	155	2643	Methyl fluoride	115	2454
Methylbromoacetone	159	—	Methyl formate	129	1243
3-Methylbutan-2-one	127	2397	2-Methylfuran	127	2301
2-Methyl-1-butene	127	2459	2-Methyl-2-heptanethiol	131	3023
2-Methyl-2-butene	127	2460	5-Methylhexan-2-one	127	2302
3-Methyl-1-butene	127	2561	Methylhydrazine	131	1244
N-Methylbutylamine	132	2945	Methyl iodide	151	2644
Methyl tert-butyl ether	127	2398	Methyl isobutyl carbinol	129	2053
Methyl butyrate	129	1237	Methyl isobutyl ketone	127	1245
Methyl chloride	115	1063	Methyl isobutyl ketone peroxide	147	2126
Methyl chloride and Chloropicrin mixtures	119	1582	Methyl isocyanate	155	2480
Methyl chloride and Methylene chloride mixture	115	1912	Methyl isopropenyl ketone, inhibited	127P	1246
Methyl chloroacetate	155	2295	Methyl isothiocyanate	131	2477
Methyl chloroformate	155	1238	Methyl isovalerate	130	2400
Methyl chloromethyl ether	131	1239	Methyl magnesium bromide in Ethyl ether	135	1928
Methyl 2-chloropropionate	132	2933	Methyl mercaptan	117	1064
Methylchlorosilane	119	2534	Methyl methacrylate monomer, inhibited	129P	1247
Methyl cyanide	131	1648	Methyl methacrylate monomer, uninhibited	129P	1247
Methylcyclohexane	128	2296	4-Methylmorpholine	132	2535
Methylcyclohexanols	129	2617	N-Methylmorpholine	132	2535
Methylcyclohexanone	127	2297	Methylmorpholine	132	2535
Methylcyclopentane	128	2298	Methyl nitrite	116	2455
Methyl dichloroacetate	155	2299	N-Methyl-N'-Nitro-N-Nitrosoguanidine	133	1325
Methyldichloroarsine	152	1556	Methyl orthosilicate	155	2606
Methyldichlorosilane	139	1242	Methyl parathion, liquid	152	2783
Methylene chloride	160	1593	Methyl parathion, liquid	152	3018
Methylene chloride and Methyl chloride mixture	115	1912	Methyl parathion, mixture, dry	152	2783
Methyl ethyl ether	115	1039	Methyl parathion, solid	152	2783
Methyl ethyl ketone	127	1193	Methylpentadiene	127	2461
Methyl ethyl ketone peroxide	147	2550			
2-Methyl-5-ethylpyridine	153	2300			



Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Methyl pentane	128	2462	Mustard Lewisite	153	2810
2-Methylpentan-2-ol	129	2560	Naphtha	128	2553
Methylphenyldichlorosilane	156	2437	Naphtha, petroleum	128	1255
Methyl phosphonic dichloride	137	9206	Naphtha, solvent	128	1256
Methyl phosphonous dichloride	135	2845	Naphthalene, crude	133	1334
1-Methylpiperidine	132	2399	Naphthalene, molten	133	2304
Methyl propionate	129	1248	Naphthalene, refined	133	1334
Methyl propyl ether	127	2612	Naphthenic acid	171	9137
Methyl propyl ketone	127	1249	alpha-Naphthylamine	153	2077
Methyltetrahydrofuran	127	2536	Naphthylamine (alpha)	153	2077
Methyl trichloroacetate	156	2533	beta-Naphthylamine	153	1650
Methyltrichlorosilane	155	1250	Naphthylamine (beta)	153	1650
alpha-Methylvaleraldehyde	130	2367	Naphthylthiourea	153	1651
Methyl valeraldehyde (alpha)	130	2367	Naphthylurea	153	1652
Methyl vinyl ketone	131P	1251	Natural gas, compressed	115	1971
Methyl vinyl ketone, stabilized	131P	1251	Natural gas, refrigerated liquid (cryogenic liquid)	115	1972
Mevinphos	152	2783	Natural gasoline	128	1257
Mexacarbate	151	2757	Neohexane	128	1208
M.I.B.C.	129	2053	Neon	121	1065
Mining reagent, liquid	153	2022	Neon, compressed	121	1065
Molybdenum pentachloride	156	2508	Neon, refrigerated liquid (cryogenic liquid)	120	1913
Monoethanolamine	153	2491	Nickel ammonium sulfate	171	9138
Mononitrotoluidines	153	2660	Nickel ammonium sulphate	171	9138
Monopropylamine	132	1277	Nickel carbonyl	131	1259
Morpholine	132	2054	Nickel catalyst, dry	135	2881
Morpholine, aqueous mixture	154	1760	Nickel chloride	151	9139
Morpholine, aqueous mixture	132	2054	Nickel cyanide	151	1653
Motor fuel anti-knock compound	131	1649	Nickel hydroxide	154	9140
Motor fuel anti-knock mixture	131	1649	Nickel nitrate	140	2725
Motor spirit	128	1203	Nickel nitrite	140	2726
Muriatic acid	157	1789	Nickel sulfate	154	9141
Musk xylene	149	2956			
Mustard	153	2810			

Name of Material	Gulde No.	ID No.	Name of Material	Gulde No.	ID No.
Nickel sulphate	154	9141	Nitric oxide and Nitrogen tetroxide mixture	124	1975
Nicotine	151	1654	Nitriles, flammable, poisonous, n.o.s.	131	3273
Nicotine compound, liquid, n.o.s.	151	3144	Nitriles, flammable, toxic, n.o.s.	131	3273
Nicotine compound, solid, n.o.s.	151	1655	Nitriles, poisonous, flammable, n.o.s.	131	3275
Nicotine hydrochloride	151	1656	Nitriles, poisonous, n.o.s.	151	3276
Nicotine hydrochloride, solution	151	1656	Nitriles, toxic, flammable, n.o.s.	131	3275
Nicotine preparation, liquid, n.o.s.	151	3144	Nitriles, toxic, n.o.s.	151	3276
Nicotine preparation, solid, n.o.s.	151	1655	Nitrites, inorganic, aqueous solution, n.o.s.	140	3219
Nicotine salicylate	151	1657	Nitrites, inorganic, n.o.s.	140	2627
Nicotine sulfate, solid	151	1658	Nitroanilines	153	1661
Nicotine sulfate, solution	151	1658	Nitroanisole	152	2730
Nicotine sulphate, solid	151	1658	Nitroanisole, liquid	152	2730
Nicotine sulphate, solution	151	1658	Nitroanisole, solid	152	2730
Nicotine tartrate	151	1659	Nitrobenzene	152	1662
Nitrate, n.o.s.	140	1477	Nitrobenzenesulfonic acid	153	2305
Nitrates, inorganic, aqueous solution, n.o.s.	140	3218	Nitrobenzenesulphonic acid	153	2305
Nitrates, inorganic, n.o.s.	140	1477	Nitrobenzotrifluorides	152	2306
Nitrating acid, spent	157	1826	Nitrobromobenzene	152	2732
Nitrating acid mixture	157	1796	Nitrobromobenzene, liquid	152	2732
Nitrating acid mixture, spent	157	1826	Nitrobromobenzene, solid	152	2732
Nitric acid, 40% or less	154	1760	Nitrocellulose, block, wet, with not less than 25% alcohol	127	2059
Nitric acid, fuming	157	2032	Nitrocellulose, colloid, granular or flake, wet, with not less than 20% alcohol or solvent	127	2059
Nitric acid, other than red fuming	157	2031	Nitrocellulose, colloid, granular or flake, wet, with not less than 20% water	113	2555
Nitric acid, red fuming	157	2032	Nitrocellulose, solution, flammable	127	2059
Nitric oxide	124	1660	Nitrocellulose, solution, in a flammable liquid	127	2059
Nitric oxide, compressed	124	1660			
Nitric oxide and Dinitrogen tetroxide mixture	124	1975			
Nitric oxide and Nitrogen dioxide mixture	124	1975			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Nitrocellulose, wet, with not less than 30% alcohol or solvent	113	2556	Nitrogen tetroxide, liquid	124	1067
Nitrocellulose membrane filters	133	3270	Nitrogen tetroxide and Nitric oxide mixture	124	1975
Nitrocellulose mixture, without plasticizer, without pigment	133	2557	Nitrogen trifluoride	122	2451
Nitrocellulose mixture, without plasticizer, with pigment	133	2557	Nitrogen trifluoride, compressed	122	2451
Nitrocellulose mixture, with plasticizer, without pigment	133	2557	Nitrogen trioxide	124	2421
Nitrocellulose mixture, with plasticizer, with pigment	133	2557	Nitroglycerin, solution in alcohol, with more than 1% but not more than 5% Nitroglycerin	127	3064
Nitrocellulose with alcohol	113	2556	Nitroglycerin, solution in alcohol, with not more than 1% Nitroglycerin	127	1204
Nitrocellulose with not less than 25% alcohol	113	2556	Nitroglycerin mixture, desensitized, liquid, flammable, n.o.s., with not more than 30% Nitroglycerin	113	3343
Nitrocellulose with plasticizing substance	133	2557	Nitroglycerin mixture, desensitized, liquid, n.o.s., with not more than 30% Nitroglycerin	113	3357
Nitrocellulose with water, not less than 25% water	113	2555	Nitroglycerin mixture, desensitized, solid, n.o.s., with more than 2% but not more than 10% Nitroglycerin	113	3319
Nitrochlorobenzenes, liquid	152	1578	Nitroglycerin mixture with more than 2% but not more than 10% Nitroglycerin, desensitized	113	3319
Nitrochlorobenzenes, solid	152	1578	Nitroguanidine (Picrite), wetted with not less than 20% water	113	1336
3-Nitro-4-chlorobenzotrifluoride	152	2307	Nitroguanidine, wetted with not less than 20% water	113	1336
Nitrocresols	153	2446	Nitrohydrochloric acid	157	1798
Nitroethane	129	2842	Nitromethane	129	1261
Nitrogen	121	1066	Nitronaphthalene	133	2538
Nitrogen, compressed	121	1066	Nitrophenols	153	1663
Nitrogen, refrigerated liquid (cryogenic liquid)	120	1977	Nitropropanes	129	2608
Nitrogen and Rare gases mixture	121	1981			
Nitrogen and Rare gases mixture, compressed	121	1981			
Nitrogen dioxide	124	1067			
Nitrogen dioxide, liquefied	124	1067			
Nitrogen dioxide and Nitric oxide mixture	124	1975			
Nitrogen peroxide, liquid	124	1067			

Name of Material	Gulde No.	ID No.	Name of Material	Gulde No.	ID No.
p-Nitrosodiethylaniline	135	—	tert-Octyl mercaptan	131	3023
p-Nitrosodimethylaniline	135	1369	Octyltrichlorosilane	156	1801
Nitrostarch, wet, with not less than 30% alcohol or solvent	113	1337	Oil, n.o.s., flash point not less than 93°C (200°F)	171	9277
Nitrostarch, wetted with not less than 20% water	113	1337	Oil, petroleum, n.o.s.	128	1270
Nitrostarch, wetted with not less than 30% solvent	113	1337	Oil gas	119	1071
Nitrosyl chloride	125	1069	Oil gas, compressed	119	1071
Nitrosylsulfuric acid	157	2308	Oleum	137	1831
Nitrosylsulphuric acid	157	2308	Oleum, with less than 30% free Sulfur trioxide	137	1831
Nitrotoluenes	152	1664	Oleum, with less than 30% free Sulphur trioxide	137	1831
Nitrotoluenes, liquid	152	1664	Oleum, with not less than 30% free Sulfur trioxide	137	1831
Nitrotoluenes, solid	152	1664	Oleum, with not less than 30% free Sulphur trioxide	137	1831
Nitrotoluidines (mono)	153	2660	Organic peroxide, liquid, n.o.s.	146	9183
Nitrous oxide	122	1070	Organic peroxide, solution, n.o.s.	146	9183
Nitrous oxide, compressed	122	1070	Organic peroxide, solid, n.o.s.	146	9187
Nitrous oxide, refrigerated liquid	122	2201	Organic peroxides, mixtures	146	2756
Nitrous oxide and Carbon dioxide mixture	126	1015	Organic peroxides, n.o.s. (including trial quantities)	148	2899
Nitroxylenes	152	1665	Organic peroxides, samples, n.o.s.	146	2255
Nitroxylol	152	1665	Organic peroxide type B, liquid	146	3101
Nonanes	128	1920	Organic peroxide type B, liquid, temperature controlled	148	3111
Nonyltrichlorosilane	156	1799	Organic peroxide type B, solid	146	3102
2,5-Norbornadiene	127P	2251	Organic peroxide type B, solid, temperature controlled	148	3112
2,5-Norbornadiene, inhibited	127P	2251	Organic peroxide type C, liquid	146	3103
Octadecyltrichlorosilane	156	1800	Organic peroxide type C, liquid, temperature controlled	148	3113
Octadiene	128P	2309	Organic peroxide type C, solid	146	3104
Octafluorobut-2-ene	126	2422	Organic peroxide type C, solid, temperature controlled	148	3114
Octafluorocyclobutane	126	1976			
Octafluoropropane	126	2424			
Octanes	128	1262			
Octanoyl peroxide	148	2129			
Octyl aldehydes	129	1191			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Organic peroxide type D, liquid	145	3105	Organochlorine pesticide, liquid, flammable, poisonous	131	2762
Organic peroxide type D, liquid, temperature controlled	148	3115	Organochlorine pesticide, liquid, flammable, toxic	131	2762
Organic peroxide type D, solid	145	3106	Organochlorine pesticide, liquid, poisonous	151	2996
Organic peroxide type D, solid, temperature controlled	148	3116	Organochlorine pesticide, liquid, poisonous, flammable	131	2995
Organic peroxide type E, liquid	145	3107	Organochlorine pesticide, liquid, toxic	151	2996
Organic peroxide type E, liquid, temperature controlled	148	3117	Organochlorine pesticide, liquid, toxic, flammable	131	2995
Organic peroxide type E, solid	145	3108	Organochlorine pesticide, solid, poisonous	151	2761
Organic peroxide type E, solid, temperature controlled	148	3118	Organochlorine pesticide, solid, toxic	151	2761
Organic peroxide type F, liquid	145	3109	Organometallic compound, poisonous, n.o.s.	151	3282
Organic peroxide type F, liquid, temperature controlled	148	3119	Organometallic compound, toxic, n.o.s.	151	3282
Organic peroxide type F, solid	145	3110	Organometallic compound, water-reactive, flammable, n.o.s.	138	3207
Organic peroxide type F, solid, temperature controlled	148	3120	Organometallic compound dispersion, water-reactive, flammable, n.o.s.	138	3207
Organic phosphate, dry	152	2783	Organometallic compound solution, water-reactive, flammable, n.o.s.	138	3207
Organic phosphate, solid	152	2783	Organophosphorus compound, poisonous, flammable, n.o.s.	131	3279
Organic phosphate compound, dry	152	2783	Organophosphorus compound, poisonous, n.o.s.	151	3278
Organic phosphate compound, solid	152	2783	Organophosphorus compound, toxic, flammable, n.o.s.	131	3279
Organic phosphate compound mixed with compressed gas	123	1955	Organophosphorus compound, toxic, n.o.s.	151	3278
Organic phosphate mixed with compressed gas	123	1955	Organophosphorus pesticide, liquid, flammable, poisonous	131	2784
Organic phosphorus compound, dry	152	2783			
Organic phosphorus compound, solid	152	2783			
Organic phosphorus compound mixed with compressed gas	123	1955			
Organic pigments, self-heating	135	3313			
Organoarsenic compound, n.o.s.	151	3280			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Organophosphorus pesticide, liquid, flammable, toxic	131	2784	Other regulated substance	171	8027
Organophosphorus pesticide, liquid, poisonous	152	3018	Other regulated substances, liquid, n.o.s.	171	3082
Organophosphorus pesticide, liquid, poisonous, flammable	131	3017	Other regulated substances, solid, n.o.s.	171	3077
Organophosphorus pesticide, liquid, toxic	152	3018	Oxalates, water soluble	154	2449
Organophosphorus pesticide, liquid, toxic, flammable	131	3017	Oxidizer, corrosive, liquid, n.o.s.	140	9193
Organophosphorus pesticide, solid, poisonous	152	2783	Oxidizer, corrosive, solid, n.o.s.	140	9194
Organophosphorus pesticide, solid, toxic	152	2783	Oxidizer, poisonous, liquid, n.o.s.	142	9199
Organotin compound, liquid, n.o.s.	153	2788	Oxidizer, poisonous, solid, n.o.s.	141	9200
Organotin compound, solid, n.o.s.	153	3146	Oxidizing liquid, corrosive, n.o.s.	140	3098
Organotin pesticide, liquid, flammable, poisonous	131	2787	Oxidizing liquid, n.o.s.	140	3139
Organotin pesticide, liquid, flammable, toxic	131	2787	Oxidizing liquid, poisonous, n.o.s.	142	3099
Organotin pesticide, liquid, poisonous	153	3020	Oxidizing liquid, toxic, n.o.s.	142	3099
Organotin pesticide, liquid, poisonous, flammable	131	3019	Oxidizing solid, corrosive, n.o.s.	140	3085
Organotin pesticide, liquid, toxic	153	3020	Oxidizing solid, flammable, n.o.s.	140	3137
Organotin pesticide, liquid, toxic, flammable	131	3019	Oxidizing solid, n.o.s.	140	1479
Organotin pesticide, solid, poisonous	153	2786	Oxidizing solid, poisonous, n.o.s.	141	3087
Organotin pesticide, solid, toxic	153	2786	Oxidizing solid, self-heating, n.o.s.	135	3100
ORM-A, n.o.s.	159	1693	Oxidizing solid, toxic, n.o.s.	141	3087
ORM-B, n.o.s.	154	1760	Oxidizing solid, water-reactive, n.o.s.	144	3121
ORM-E, liquid, n.o.s.	171	9188	Oxidizing substances, liquid, corrosive, n.o.s.	140	3098
ORM-E, solid, n.o.s.	171	9188	Oxidizing substances, liquid, n.o.s.	140	3139
Osmium tetroxide	154	2471	Oxidizing substances, liquid, poisonous, n.o.s.	142	3099
			Oxidizing substances, liquid, toxic, n.o.s.	142	3099

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Oxidizing substances, self-heating, n.o.s.	135	3100	Paint related material (corrosive)	153	3066
Oxidizing substances, solid, corrosive, n.o.s.	140	3085	Paint related material (flammable)	128	1263
Oxidizing substances, solid, flammable, n.o.s.	140	3137	Paper, unsaturated oil treated	133	1379
Oxidizing substances, solid, n.o.s.	140	1479	Paraformaldehyde	133	2213
Oxidizing substances, solid, poisonous, n.o.s.	141	3087	Paraldehyde	129	1264
Oxidizing substances, solid, self-heating, n.o.s.	135	3100	Parathion	152	2783
Oxidizing substances, solid, toxic, n.o.s.	141	3087	Parathion and compressed gas mixture	123	1967
Oxidizing substances, solid, which in contact with water emit flammable gases, n.o.s.	144	3121	Parathion mixture, dry	152	2783
Oxygen	122	1072	Parathion mixture, liquid	152	2783
Oxygen, compressed	122	1072	PCB	171	2315
Oxygen, refrigerated liquid (cryogenic liquid)	122	1073	PD	152	1556
Oxygen and Carbon dioxide mixture	122	1014	Pelargonyl peroxide	148	2130
Oxygen and Carbon dioxide mixture, compressed	122	1014	Pentaborane	135	1380
Oxygen and Rare gases mixture	122	1980	Pentachloroethane	151	1669
Oxygen and Rare gases mixture, compressed	122	1980	Pentachlorophenol	154	3155
Oxygen difluoride	124	2190	Pentaerythrite tetranitrate mixture, desensitized, solid, n.o.s., with more than 10% but not more than 20% PETN	113	3344
Oxygen difluoride, compressed	124	2190	Pentafluoroethane	126	3220
Oxygen generator, chemical	140	3356	Pentafluoroethane and Ethylene oxide mixture, with not more than 7.9% Ethylene oxide	126	3298
Oxygen generators, small	140	8037	Pentamethylheptane	128	2286
Paint (corrosive)	154	1760	Pentan-2,4-dione	131	2310
Paint (corrosive)	153	3066	n-Pentane	128	1265
Paint (flammable)	128	1263	2,4-Pentanedione	131	2310
Paint related material (corrosive)	154	1760	Pentane-2,4-dione	131	2310
			Pentanes	128	1265
			Pentanols	129	1105
			1-Pentene	127	1108
			1-Pentol	153P	2705

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Peracetic acid, solution	147	2131	Pesticide, liquid, flammable, toxic	131	3021
Percarbonates, inorganic, n.o.s.	140	3217	Pesticide, liquid, poisonous, flammable, n.o.s.	131	2903
Perchlorate, n.o.s.	140	1481	Pesticide, liquid, poisonous, n.o.s.	151	2902
Perchlorates, inorganic, aqueous solution, n.o.s.	140	3211	Pesticide, liquid, toxic, flammable, n.o.s.	131	2903
Perchlorates, inorganic, n.o.s.	140	1481	Pesticide, liquid, toxic, n.o.s.	151	2902
Perchloric acid, with more than 50% but not more than 72% acid	143	1873	Pesticide, solid, poisonous	151	2588
Perchloric acid, with not more than 50% acid	140	1802	Pesticide, solid, poisonous, n.o.s.	151	2588
Perchloroethylene	160	1897	Pesticide, solid, toxic, n.o.s.	151	2588
Perchloromethyl mercaptan	157	1670	Pesticide, water-reactive	135	2210
Perchloryl fluoride	124	3083	Petrol	128	1203
Perfluoroethyl vinyl ether	115	3154	Petroleum crude oil	128	1267
Perfluoro(ethyl vinyl ether)	115	3154	Petroleum distillates, n.o.s.	128	1268
Perfluoromethyl vinyl ether	115	3153	Petroleum ether	128	1271
Perfluoro(methyl vinyl ether)	115	3153	Petroleum gases, liquefied	115	1075
Perfumery products, with flammable solvents	127	1266	Petroleum naphtha	128	1255
Permanganate, n.o.s.	140	1482	Petroleum oil	128	1270
Permanganates, inorganic, aqueous solution, n.o.s.	140	3214	Petroleum products, n.o.s.	128	1268
Permanganates, inorganic, n.o.s.	140	1482	Petroleum spirit	128	1271
Peroxides, inorganic, n.o.s.	140	1483	Phenacyl bromide	153	2645
Peroxyacetic acid, solution	147	2131	Phenetidines	153	2311
Persulfates, inorganic, aqueous solution, n.o.s.	140	3216	Phenol, liquid	153	2821
Persulfates, inorganic, n.o.s.	140	3215	Phenol, molten	153	2312
Persulphates, inorganic, aqueous solution, n.o.s.	140	3216	Phenol, solid	153	1671
Persulphates, inorganic, n.o.s.	140	3215	Phenol solution	153	2821
Pesticide, liquid, flammable, poisonous	131	3021	Phenolates, liquid	154	2904
			Phenolates, solid	154	2905
			Phenolsulfonic acid, liquid	153	1803
			Phenolsulphonic acid, liquid	153	1803



Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Phenoxyacetic acid derivative pesticide, liquid, flammable, poisonous	131	3346	Phenyldichloroarsine	152	1556
Phenoxyacetic acid derivative pesticide, liquid, flammable, toxic	131	3346	Phenylenediamines	153	1673
Phenoxyacetic acid derivative pesticide, liquid, poisonous	153	3348	Phenylhydrazine	153	2572
Phenoxyacetic acid derivative pesticide, liquid, poisonous, flammable	131	3347	Phenyl isocyanate	155	2487
Phenoxyacetic acid derivative pesticide, liquid, toxic	153	3348	Phenyl mercaptan	131	2337
Phenoxyacetic acid derivative pesticide, liquid, poisonous, flammable	131	3347	Phenylmercuric acetate	151	1674
Phenoxyacetic acid derivative pesticide, liquid, toxic	153	3348	Phenylmercuric compound, n.o.s.	151	2026
Phenoxyacetic acid derivative pesticide, liquid, toxic, flammable	131	3347	Phenylmercuric hydroxide	151	1894
Phenoxyacetic acid derivative pesticide, solid, poisonous	153	3345	Phenylmercuric nitrate	151	1895
Phenoxyacetic acid derivative pesticide, solid, toxic	153	3345	Phenylphosphorus dichloride	137	2798
Phenoxy pesticide, liquid, flammable, poisonous	131	2766	Phenylphosphorus thiodichloride	137	2799
Phenoxy pesticide, liquid, flammable, toxic	131	2766	Phenyltrichlorosilane	156	1804
Phenoxy pesticide, liquid, poisonous	152	3000	Phenyl urea pesticide, liquid, flammable, poisonous	131	2768
Phenoxy pesticide, liquid, poisonous, flammable	131	2999	Phenyl urea pesticide, liquid, flammable, toxic	131	2768
Phenoxy pesticide, liquid, toxic	152	3000	Phenyl urea pesticide, liquid, poisonous	151	3002
Phenoxy pesticide, liquid, toxic, flammable	131	2999	Phenyl urea pesticide, liquid, poisonous, flammable	131	3001
Phenoxy pesticide, solid, poisonous	152	2765	Phenyl urea pesticide, liquid, toxic	151	3002
Phenoxy pesticide, solid, toxic	152	2765	Phenyl urea pesticide, liquid, toxic, flammable	131	3001
Phenylacetonitrile, liquid	152	2470	Phenyl urea pesticide, solid, poisonous	151	2767
Phenylacetyl chloride	156	2577	Phenyl urea pesticide, solid, toxic	151	2767
Phenylcarbylamine chloride	151	1672	Phosgene	125	1076
Phenyl chloroformate	156	2746	Phosgene oxime	154	2811
			9-Phosphabicyclononanes	135	2940
			Phosphine	119	2199
			Phosphoric acid	154	1805

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Phosphoric anhydride	137	1807	Phosphorus sesquisulphide, free from yellow and white Phosphorus	139	1341
Phosphorous acid	154	2834	Phosphorus tribromide	137	1808
Phosphorous acid, ortho	154	2834	Phosphorus trichloride	137	1809
Phosphorus, amorphous	133	1338	Phosphorus trioxide	157	2578
Phosphorus, amorphous, red	133	1338	Phosphorus trisulfide, free from yellow and white Phosphorus	139	1343
Phosphorus, white, dry or under water or in solution	136	1381	Phosphorus trisulphide, free from yellow and white Phosphorus	139	1343
Phosphorus, white, molten	136	2447	Phthalic anhydride	156	2214
Phosphorus, yellow, dry or under water or in solution	136	1381	Phthalimide derivative pesticide, liquid, flammable, poisonous	131	2774
Phosphorus heptasulfide, free from yellow and white Phosphorus	139	1339	Phthalimide derivative pesticide, liquid, flammable, toxic	131	2774
Phosphorus heptasulphide, free from yellow and white Phosphorus	139	1339	Phthalimide derivative pesticide, liquid, poisonous	151	3008
Phosphorus oxybromide	137	1939	Phthalimide derivative pesticide, liquid, poisonous, flammable	131	3007
Phosphorus oxybromide, molten	137	2576	Phthalimide derivative pesticide, liquid, toxic	151	3008
Phosphorus oxybromide, solid	137	1939	Phthalimide derivative pesticide, liquid, toxic, flammable	131	3007
Phosphorus oxychloride	137	1810	Phthalimide derivative pesticide, solid, poisonous	151	2773
Phosphorus pentabromide	137	2691	Phthalimide derivative pesticide, solid, toxic	151	2773
Phosphorus pentachloride	137	1806	Picolines	130	2313
Phosphorus pentafluoride	125	2198	Picric acid, wet, with not less than 10% water	113	1344
Phosphorus pentafluoride, compressed	125	2198	Picrite, wetted	113	1336
Phosphorus pentasulfide, free from yellow and white Phosphorus	139	1340	Pinacolyl methylphosphonofluoridate	153	2810
Phosphorus pentasulphide, free from yellow and white Phosphorus	139	1340			
Phosphorus pentoxide	137	1807			
Phosphorus sesquisulfide, free from yellow and white Phosphorus	139	1341			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Pinane hydroperoxide	147	2162	Poisonous liquid, flammable, n.o.s.	131	2929
alpha-Pinene	127	2368	Poisonous liquid, flammable, n.o.s. (Inhalation Hazard Zone A)	131	2929
Pinene (alpha)	127	2368	Poisonous liquid, flammable, n.o.s. (Inhalation Hazard Zone B)	131	2929
Pine oil	129	1272	Poisonous liquid, flammable, organic, n.o.s.	131	2929
Piperazine	153	2579	Poisonous liquid, flammable, organic, n.o.s. (Inhalation Hazard Zone A)	131	2929
Piperidine	132	2401	Poisonous liquid, flammable, organic, n.o.s. (Inhalation Hazard Zone B)	131	2929
Plastic molding compound	171	3314	Poisonous liquid, flammable, organic, n.o.s. (Inhalation Hazard Zone A)	131	2929
Plastic molding material	171	—	Poisonous liquid, flammable, organic, n.o.s. (Inhalation Hazard Zone B)	131	2929
Plastic, nitrocellulose-based, spontaneously combustible, n.o.s.	135	2006	Poisonous liquid, inorganic, n.o.s.	151	3287
Plastics moulding compound	171	3314	Poisonous liquid, inorganic, n.o.s. (Inhalation Hazard Zone A)	151	3287
Plastics, nitrocellulose-based, self-heating, n.o.s.	135	2006	Poisonous liquid, inorganic, n.o.s. (Inhalation Hazard Zone B)	151	3287
Poison B, liquid, n.o.s.	153	2810	Poisonous liquid, n.o.s.	123	1955
Poison B, solid, n.o.s.	154	2811	Poisonous liquid, n.o.s.	153	2810
Poisonous gas, flammable, n.o.s.	119	1953	Poisonous liquid, n.o.s. (Inhalation Hazard Zone A)	153	2810
Poisonous gas, n.o.s.	123	1955	Poisonous liquid, n.o.s. (Inhalation Hazard Zone B)	153	2810
Poisonous liquid, corrosive, inorganic, n.o.s.	154	3289	Poisonous liquid, organic, n.o.s.	153	2810
Poisonous liquid, corrosive, inorganic, n.o.s. (Inhalation Hazard Zone A)	154	3289	Poisonous liquid, organic, n.o.s. (Inhalation Hazard Zone A)	153	2810
Poisonous liquid, corrosive, inorganic, n.o.s. (Inhalation Hazard Zone B)	154	3289	Poisonous liquid, organic, n.o.s. (Inhalation Hazard Zone B)	153	2810
Poisonous liquid, corrosive, n.o.s.	154	2927	Poisonous liquid, oxidizing, n.o.s.	142	3122
Poisonous liquid, corrosive, n.o.s. (Inhalation Hazard Zone A)	154	2927			
Poisonous liquid, corrosive, n.o.s. (Inhalation Hazard Zone B)	154	2927			
Poisonous liquid, flammable, n.o.s.	119	1953			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Poisonous liquid, oxidizing, n.o.s. (Inhalation Hazard Zone A)	142	3122	Poisonous solid, self-heating, n.o.s.	136	3124
Poisonous liquid, oxidizing, n.o.s. (Inhalation Hazard Zone B)	142	3122	Poisonous solid, water-reactive, n.o.s.	139	3125
Poisonous liquid, water-reactive, n.o.s.	139	3123	Poisonous solid, which in contact with water emits flammable gases, n.o.s.	139	3125
Poisonous liquid, water-reactive, n.o.s. (Inhalation Hazard Zone A)	139	3123	Polyalkylamines, n.o.s.	132	2733
Poisonous liquid, water-reactive, n.o.s. (Inhalation Hazard Zone B)	139	3123	Polyalkylamines, n.o.s.	132	2734
Poisonous liquid, which in contact with water emits flammable gases, n.o.s.	139	3123	Polyalkylamines, n.o.s.	153	2735
Poisonous liquid, which in contact with water emits flammable gases, n.o.s. (Inhalation Hazard Zone A)	139	3123	Polyamines, flammable, corrosive, n.o.s.	132	2733
Poisonous liquid, which in contact with water emits flammable gases, n.o.s. (Inhalation Hazard Zone B)	139	3123	Polyamines, liquid, corrosive, flammable, n.o.s.	132	2734
Poisonous solid, corrosive, inorganic, n.o.s.	154	3290	Polyamines, liquid, corrosive, n.o.s.	153	2735
Poisonous solid, corrosive, n.o.s.	154	2928	Polyamines, solid, corrosive, n.o.s.	154	3259
Poisonous solid, flammable, n.o.s.	134	2930	Polychlorinated biphenyls	171	2315
Poisonous solid, flammable, organic, n.o.s.	134	2930	Polychlorinated biphenyls, liquid	171	2315
Poisonous solid, inorganic, n.o.s.	151	3288	Polychlorinated biphenyls, solid	171	2315
Poisonous solid, n.o.s.	154	2811	Polyester resin kit	146	2255
Poisonous solid, organic, n.o.s.	154	2811	Polyester resin kit	127	3269
Poisonous solid, oxidizing, n.o.s.	141	3086	Polyhalogenated biphenyls, liquid	171	3151
			Polyhalogenated biphenyls, solid	171	3152
			Polyhalogenated terphenyls, liquid	171	3151
			Polyhalogenated terphenyls, solid	171	3152
			Polymeric beads, expandable	133	2211
			Polymerizable material, stabilized with dry ice	171P	—
			Polystyrene beads, expandable	133	2211
			Potassium	138	2257

Name of Material	Gulde No.	ID No.	Name of Material	Gulde No.	ID No.
Potassium, metal	138	2257	Potassium metavanadate	151	2864
Potassium, metal alloys	138	1420	Potassium monoxide	154	2033
Potassium, metal liquid alloy	138	1420	Potassium nitrate	140	1486
Potassium arsenate	151	1677	Potassium nitrate and Sodium nitrate mixture	140	1499
Potassium arsenite	154	1678	Potassium nitrate and Sodium nitrite mixture	140	1487
Potassium bifluoride	154	1811	Potassium nitrite	140	1438
Potassium bisulfite solution	154	2693	Potassium perchlorate	140	1489
Potassium bisulphite solution	154	2693	Potassium permanganate	140	1490
Potassium borohydride	138	1870	Potassium peroxide	144	1491
Potassium bromate	140	1484	Potassium persulfate	140	1492
Potassium chlorate	140	1485	Potassium persulphate	140	1492
Potassium chlorate, aqueous solution	140	2427	Potassium phosphide	139	2012
Potassium chlorate, solution	140	2427	Potassium selenate	151	2630
Potassium chromate	171	9142	Potassium selenite	151	2630
Potassium cuprocyanide	157	1679	Potassium silicofluoride	151	2655
Potassium cyanide	157	1680	Potassium sodium alloys	138	1422
Potassium dichloro-s-triazinetrione, dry	140	2465	Potassium sulfide, anhydrous	135	1382
Potassium dithionite	135	1929	Potassium sulfide, hydrated, with not less than 30% water of crystallization	153	1847
Potassium fluoride	154	1812	Potassium sulfide, hydrated, with not less than 30% water of hydration	153	1847
Potassium fluoroacetate	151	2628	Potassium sulfide, with less than 30% water of crystallization	135	1382
Potassium fluorosilicate	151	2655	Potassium sulfide, with less than 30% water of hydration	135	1382
Potassium hydrogendifluoride	154	1811	Potassium sulphide, anhydrous	135	1382
Potassium hydrogen fluoride, solution	154	1811	Potassium sulphide, hydrated, with not less than 30% water of crystallization	153	1847
Potassium hydrogen sulfate	154	2509	Potassium sulphide, hydrated, with not less than 30% water of hydration	153	1847
Potassium hydrogen sulphate	154	2509	Potassium sulphide, anhydrous	135	1382
Potassium hydrosulfite	135	1929	Potassium sulphide, hydrated, with not less than 30% water of crystallization	153	1847
Potassium hydrosulphite	135	1929	Potassium sulphide, hydrated, with not less than 30% water of hydration	153	1847
Potassium hydroxide, dry, solid	154	1813	Potassium sulphide, anhydrous	135	1382
Potassium hydroxide, flake	154	1813	Potassium sulphide, hydrated, with not less than 30% water of hydration	153	1847
Potassium hydroxide, solid	154	1813			
Potassium hydroxide, solution	154	1814			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Potassium sulphide, with less than 30% water of crystallization	135	1382	Propylene	115	1075
Potassium sulphide, with less than 30% water of hydration	135	1382	Propylene	115	1077
Potassium superoxide	143	2466	Propylene, Ethylene and Acetylene in mixture, refrigerated liquid containing at least 71.5% Ethylene with not more than 22.5% Acetylene and not more than 6% Propylene	116	3138
Printing ink, flammable	129	1210	Propylene chlorohydrin	131	2611
Printing ink related material	129	1210	1,2-Propylenediamine	132	2258
Propadiene, inhibited	116P	2200	1,3-Propylenediamine	132	2258
Propadiene and Methylacetylene mixture, stabilized	116P	1060	Propylene dichloride	130	1279
Propane	115	1075	Propyleneimine, inhibited	131P	1921
Propane	115	1978	Propylene oxide	127P	1280
Propane-Ethane mixture, refrigerated liquid	115	1961	Propylene oxide and Ethylene oxide mixture, with not more than 30% Ethylene oxide	129P	2983
Propane mixture	115	1075	Propylene tetramer	128	2850
Propane mixture	115	1978	Propyl formates	129	1281
Propanethiols	130	2402	n-Propyl isocyanate	155	2482
n-Propanol	129	1274	Propyl mercaptan	130	2402
Propargyl alcohol	131	1986	n-Propyl nitrate	131	1865
Propionaldehyde	129	1275	Propyltrichlorosilane	155	1816
Propionic acid	132	1848	Pyrethroid pesticide, liquid, flammable, poisonous	131	3350
Propionic anhydride	156	2496	Pyrethroid pesticide, liquid, flammable, toxic	131	3350
Propionitrile	131	2404	Pyrethroid pesticide, liquid, poisonous	151	3352
Propionyl chloride	132	1815	Pyrethroid pesticide, liquid, poisonous, flammable	131	3351
Propionyl peroxide	148	2132	Pyrethroid pesticide, liquid, toxic	151	3352
n-Propyl acetate	129	1276	Pyrethroid pesticide, liquid, toxic, flammable	131	3351
normal Propyl alcohol	129	1274	Pyrethroid pesticide, solid, poisonous	151	3349
Propyl alcohol, normal	129	1274			
Propylamine	132	1277			
n-Propyl benzene	127	2364			
Propyl chloride	129	1278			
n-Propyl chloroformate	155	2740			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Pyrethroid pesticide, solid, toxic	151	3349	Radioactive material, excepted package, articles manufactured from depleted Uranium	161	2910
Pyridine	129	1282	Radioactive material, excepted package, articles manufactured from natural Thorium	161	2909
Pyrophoric alloy, n.o.s.	135	1383	Radioactive material, excepted package, articles manufactured from natural Uranium	161	2910
Pyrophoric liquid, inorganic, n.o.s.	135	3194	Radioactive material, excepted package, articles manufactured from natural Thorium	161	2910
Pyrophoric liquid, n.o.s.	135	2845	Radioactive material, excepted package, articles manufactured from natural Uranium	161	2909
Pyrophoric liquid, organic, n.o.s.	135	2845	Radioactive material, excepted package, articles manufactured from natural Uranium	161	2910
Pyrophoric metal, n.o.s.	135	1383	Radioactive material, excepted package, empty packaging	161	2908
Pyrophoric organometallic compound, n.o.s.	135	3203	Radioactive material, excepted package, empty packaging	161	2910
Pyrophoric organometallic compound, water-reactive, n.o.s.	135	3203	Radioactive material, excepted package, instruments or articles	161	2910
Pyrophoric solid, inorganic, n.o.s.	135	3200	Radioactive material, excepted package, limited quantity of material	161	2911
Pyrophoric solid, n.o.s.	135	2846	Radioactive material, fissile, n.o.s.	165	2918
Pyrophoric solid, organic, n.o.s.	135	2846	Radioactive material, instruments or articles	161	2911
Pyrosulfuryl chloride	137	1817	Radioactive material, limited quantity, n.o.s.	161	2910
Pyrosulphuryl chloride	137	1817	Radioactive material, low specific activity (LSA), n.o.s.	162	2912
Pyroxylin plastic, rod, sheet, roll, tube or scrap	133	1325	Radioactive material, low specific activity (LSA-I)	162	2912
Pyrrolidine	132	1922			
Quinoline	154	2656			
Radioactive material, articles manufactured from depleted Uranium	161	2909			
Radioactive material, articles manufactured from natural Thorium	161	2909			
Radioactive material, articles manufactured from natural Uranium	161	2909			
Radioactive material, empty packages	161	2908			
Radioactive material, excepted package, articles manufactured from depleted Uranium	161	2909			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Radioactive material, low specific activity (LSA-II)	162	3321	Radioactive material, Type B(M) package	163	2917
Radioactive material, low specific activity (LSA-II), fissile	165	3324	Radioactive material, Type B(M) package, fissile	165	3329
Radioactive material, low specific activity (LSA-III)	162	3322	Radioactive material, Type B(U) package	163	2916
Radioactive material, low specific activity (LSA-III), fissile	165	3325	Radioactive material, Type B(U) package, fissile	165	3328
Radioactive material, n.o.s.	163	2982	Radioactive material, Type C package	163	3323
Radioactive material, special form, n.o.s.	164	2974	Radioactive material, Type C package, fissile	165	3330
Radioactive material, surface contaminated objects (SCO)	162	2913	Radioactive material, Uranium hexafluoride, fissile	166	2977
Radioactive material, surface contaminated objects (SCO-I)	162	2913	Radioactive material, Uranium hexafluoride, non-fissile or fissile-excepted	166	2978
Radioactive material, surface contaminated objects (SCO-I), fissile	165	3326	Rags, oily	133	1856
Radioactive material, surface contaminated objects (SCO-II)	162	2913	Rare gases and Nitrogen mixture	121	1981
Radioactive material, surface contaminated objects (SCO-II), fissile	165	3326	Rare gases and Nitrogen mixture, compressed	121	1981
Radioactive material, transported under special arrangement	163	2919	Rare gases and Oxygen mixture	122	1980
Radioactive material, transported under special arrangement, fissile	165	3331	Rare gases and Oxygen mixture, compressed	122	1980
Radioactive material, Type A package	163	2915	Rare gases mixture	121	1979
Radioactive material, Type A package, fissile	165	3327	Rare gases mixture, compressed	121	1979
Radioactive material, Type A package, special form	164	3332	Receptacles, small, containing gas	115	2037
Radioactive material, Type A package, special form, fissile	165	3333	Red phosphorus	133	1338
			Red phosphorus, amorphous	133	1338
			Refrigerant gas, n.o.s.	126	1078
			Refrigerant gas, n.o.s. (flammable)	115	1954
			Refrigerant gas R-12	126	1028
			Refrigerant gas R-12 and Refrigerant gas R-152a azeotropic mixture with 74% Refrigerant gas R-12	126	2602



Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Refrigerant gas R-12B1	126	1974	Refrigerant gas R-227	126	3296
Refrigerant gas R-13	126	1022	Refrigerant gas R-404A	126	3337
Refrigerant gas R-13 and Refrigerant gas R-23 azeotropic mixture with 60% Refrigerant gas R-13	126	2599	Refrigerant gas R-407A	126	3338
Refrigerant gas R-13B1	126	1009	Refrigerant gas R-407B	126	3339
Refrigerant gas R-14, compressed	126	1982	Refrigerant gas R-407C	126	3340
Refrigerant gas R-21	126	1029	Refrigerant gas R-500 (azeotropic mixture of Refrigerant gas R-12 and Refrigerant gas R-152a with approximately 74% Refrigerant gas R-12)	126	2602
Refrigerant gas R-22	126	1018	Refrigerant gas R-502	126	1973
Refrigerant gas R-23	126	1984	Refrigerant gas R-503 (azeotropic mixture of Refrigerant gas R-13 and Refrigerant gas R-23 with approximately 60% Refrigerant gas R-13)	126	2599
Refrigerant gas R-23 and Refrigerant gas R-13 azeotropic mixture with 60% Refrigerant gas R-13	126	2599	Refrigerant gas R-1216	126	1858
Refrigerant gas R-32	115	3252	Refrigerant gas R-1132a	116P	1959
Refrigerant gas R-40	115	1063	Refrigerant gas R-1318	126	2422
Refrigerant gas R-41	115	2454	Refrigerant gas RC-318	126	1976
Refrigerant gas R-114	126	1958	Refrigerating machine	128	1993
Refrigerant gas R-115	126	1020	Refrigerating machines	115	8023
Refrigerant gas R-116, compressed	126	2193	Refrigerating machines, containing Ammonia solutions (UN2073)	126	2857
Refrigerant gas R-124	126	1021	Refrigerating machines, containing Ammonia solutions (UN2672)	126	2857
Refrigerant gas R-125	126	3220	Refrigerating machines, containing flammable, liquefied gas	115	1954
Refrigerant gas R-133a	126	1983	Refrigerating machines, containing flammable, non- poisonous, non-corrosive, liquefied gas	115	1954
Refrigerant gas R-134a	126	3159			
Refrigerant gas R-143a	115	2035			
Refrigerant gas R-142b	115	2517			
Refrigerant gas R-152a	115	1030			
Refrigerant gas R-152a and Refrigerant gas R-12 azeotropic mixture with 74% Refrigerant gas R-12	126	2602			
Refrigerant gas R-161	115	2453			
Refrigerant gas R-218	126	2424			

Name of Material	Gulde No.	ID No.	Name of Material	Gulde No.	ID No.
Refrigerating machines, containing flammable, non-toxic, liquefied gas	115	3358	Seat-belt pre-tensioners	171	3268
Refrigerating machines, containing non-flammable, liquefied gas	126	2857	Seat-belt pre-tensioners, compressed gas	126	3353
Refrigerating machines, containing non-flammable, non-poisonous, liquefied gas	126	2857	Seat-belt pre-tensioners, pyrotechnic	171	3268
Refrigerating machines, containing non-flammable, non-toxic, non-corrosive, liquefied gas	126	2857	Seed cake, with more than 1.5% oil and not more than 11% moisture	135	1386
Regulated medical waste, n.o.s.	158	3291	Seed cake, with not more than 1.5% oil and not more than 11% moisture	135	2217
Resin solution	127	1866	Selenates	151	2630
Resorcinol	153	2876	Selenic acid	154	1905
Rosin oil	127	1286	Selenites	151	2630
Rubber scrap, powdered or granulated	133	1345	Selenium compound, n.o.s.	151	3283
Rubber shoddy, powdered or granulated	133	1345	Selenium disulfide	153	2657
Rubber solution	127	1287	Selenium disulphide	153	2657
Rubidium	138	1423	Selenium hexafluoride	125	2194
Rubidium hydroxide	154	2678	Selenium oxide	154	2811
Rubidium hydroxide, solid	154	2678	Selenium oxychloride	157	2879
Rubidium hydroxide, solution	154	2677	Selenium powder	152	2658
Rubidium metal	138	1423	Self-heating liquid, corrosive, inorganic, n.o.s.	136	3188
SA	119	2188	Self-heating liquid, corrosive, organic, n.o.s.	136	3185
Sarin	153	2810	Self-heating liquid, inorganic, n.o.s.	135	3186
Seat-belt modules	171	3268	Self-heating liquid, organic, n.o.s.	135	3183
			Self-heating liquid, poisonous, inorganic, n.o.s.	136	3187
			Self-heating liquid, poisonous, organic, n.o.s.	136	3184
			Self-heating liquid, toxic, inorganic, n.o.s.	136	3187
			Self-heating liquid, toxic, organic, n.o.s.	136	3184

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Self-heating metal powders, n.o.s.	135	3189	Self-reactive liquid type B, temperature controlled	150	3231
Self-heating solid, corrosive, inorganic, n.o.s.	136	3192	Self-reactive liquid type C	149	3223
Self-heating solid, corrosive, organic, n.o.s.	136	3126	Self-reactive liquid type C, temperature controlled	150	3233
Self-heating solid, inorganic, n.o.s.	135	3190	Self-reactive liquid type D	149	3225
Self-heating solid, inorganic, poisonous, n.o.s.	136	3191	Self-reactive liquid type D, temperature controlled	150	3235
Self-heating solid, inorganic, toxic, n.o.s.	136	3191	Self-reactive liquid type E	149	3227
Self-heating solid, organic, n.o.s.	135	3088	Self-reactive liquid type E, temperature controlled	150	3237
Self-heating solid, organic, poisonous, n.o.s.	136	3128	Self-reactive liquid type F	149	3229
Self-heating solid, organic, toxic, n.o.s.	136	3128	Self-reactive liquid type F, temperature controlled	150	3239
Self-heating solid, oxidizing, n.o.s.	135	3127	Self-reactive solid type B	149	3222
Self-heating solid, poisonous, inorganic, n.o.s.	136	3191	Self-reactive solid type B, temperature controlled	150	3232
Self-heating solid, poisonous, organic, n.o.s.	136	3128	Self-reactive solid type C	149	3224
Self-heating solid, toxic, inorganic, n.o.s.	136	3191	Self-reactive solid type C, temperature controlled	150	3234
Self-heating solid, toxic, organic, n.o.s.	136	3128	Self-reactive solid type D	149	3226
Self-heating substance, solid, corrosive, n.o.s.	136	3126	Self-reactive solid type D, temperature controlled	150	3236
Self-heating substances, solid, n.o.s.	135	3088	Self-reactive solid type E	149	3228
Self-heating substances, solid, oxidizing, n.o.s.	135	3127	Self-reactive solid type E, temperature controlled	150	3238
Self-heating substances, solid, poisonous, n.o.s.	136	3128	Self-reactive solid type F	149	3230
Self-heating substances, solid, toxic, n.o.s.	136	3128	Self-reactive solid type F, temperature controlled	150	3240
Self-reactive liquid type B	149	3221	Self-reactive substances, samples, n.o.s.	149	3031
			Self-reactive substances, trial quantities, n.o.s.	149	3032
			Shale oil	128	1288
			Silane	116	2203
			Silicofluorides, n.o.s.	151	2856

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Silane, compressed	116	2203	Sodium bisulphate, solution	154	2837
Silicon powder, amorphous	170	1346	Sodium borohydride	138	1426
Silicon tetrachloride	157	1818	Sodium borohydride and Sodium hydroxide solution, with not more than 12% Sodium borohydride and not more than 40% Sodium hydroxide	157	3320
Silicon tetrafluoride	125	1859			
Silicon tetrafluoride, compressed	125	1859			
Silver arsenite	151	1683	Sodium bromate	141	1494
Silver cyanide	151	1684	Sodium cacodylate	152	1688
Silver nitrate	140	1493	Sodium chlorate	140	1495
Silver picrate, wetted with not less than 30% water	113	1347	Sodium chlorate, aqueous solution	140	2428
Sludge acid	153	1906	Sodium chlorite	143	1496
Smokeless powder for small arms	133	1325	Sodium chlorite, solution, with more than 5% available Chlorine	154	1908
Smokeless powder for small arms	133	3178	Sodium chloroacetate	151	2659
Soda lime, with more than 4% Sodium hydroxide	154	1907	Sodium chromate	171	9145
Sodium	138	1428	Sodium cuprocyanide, solid	157	2316
Sodium aluminate, solid	154	2812	Sodium cuprocyanide, solution	157	2317
Sodium aluminate, solution	154	1819	Sodium cyanide	157	1689
Sodium aluminum hydride	138	2835	Sodium 2-diazo-1-naphthol-4-sulfonate	149	3040
Sodium ammonium vanadate	154	2863	Sodium 2-diazo-1-naphthol-4-sulphonate	149	3040
Sodium arsanilate	154	2473	Sodium 2-diazo-1-naphthol-5-sulfonate	149	3041
Sodium arsenate	151	1685	Sodium 2-diazo-1-naphthol-5-sulphonate	149	3041
Sodium arsenite, aqueous solution	154	1686			
Sodium arsenite, solid	151	2027	Sodium dichloroisocyanurate	140	2465
Sodium azide	153	1687	Sodium dichloro-s-triazinetriene	140	2465
Sodium bifluoride, solid	154	2439	Sodium dinitro-o-cresolate, wetted with not less than 15% water	113	1348
Sodium bifluoride, solution	154	2439			
Sodium bisulfate, solid	154	1821	Sodium dinitro-ortho-cresolate, wetted	113	1348
Sodium bisulfate, solution	154	2837			
Sodium bisulphate, solid	154	1821	Sodium dithionite	135	1384

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Sodium dodecylbenzenesulfonate (branched chain)	171	9146	Sodium hydrosulphide, solution	154	2922
Sodium dodecylbenzenesulphonate (branched chain)	171	9146	Sodium hydrosulphide, with less than 25% water of crystallization	135	2318
Sodium fluoride	154	1690	Sodium hydrosulphide, with not less than 25% water of crystallization	154	2949
Sodium fluoride, solid	154	1690	Sodium hydrosulphite	135	1384
Sodium fluoride, solution	154	1690	Sodium hydroxide, dry	154	1823
Sodium fluoroacetate	151	2629	Sodium hydroxide, bead	154	1823
Sodium fluorosilicate	154	2674	Sodium hydroxide, flake	154	1823
Sodium hydride	138	1427	Sodium hydroxide, granular	154	1823
Sodium hydrogendifluoride	154	2439	Sodium hydroxide, solid	154	1823
Sodium hydrogen fluoride	154	2439	Sodium hydroxide, solution	154	1824
Sodium hydrogen sulfate, solid	154	1821	Sodium methylate	138	1431
Sodium hydrogen sulfate, solution	154	2837	Sodium methylate, alcohol mixture	132	1289
Sodium hydrogen sulphate, solid	154	1821	Sodium methylate, dry	138	1431
Sodium hydrogen sulphate, solution	154	2837	Sodium methylate, solution in alcohol	132	1289
Sodium hydrosulfide, solid	154	2923	Sodium monoxide	157	1825
Sodium hydrosulfide, solid, with less than 25% water of crystallization	135	2318	Sodium nitrate	140	1498
Sodium hydrosulfide, solution	154	2922	Sodium nitrate and Potassium nitrate mixture	140	1499
Sodium hydrosulfide, with less than 25% water of crystallization	135	2318	Sodium nitrite	140	1500
Sodium hydrosulfide, with not less than 25% water of crystallization	154	2949	Sodium nitrite and Potassium nitrate mixtures	140	1487
Sodium hydrosulfite	135	1384	Sodium nitrite mixture	140	1487
Sodium hydrosulphide, solid	154	2923	Sodium pentachlorophenate	154	2567
Sodium hydrosulphide, solid, with less than 25% water of crystallization	135	2318	Sodium percarbonates	140	2467
			Sodium perchlorate	140	1502
			Sodium permanganate	140	1503
			Sodium peroxide	144	1504
			Sodium peroxoborate, anhydrous	140	3247

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Sodium persulfate	140	1505	Stannic phosphides	139	1433
Sodium persulphate	140	1505	Stannous chloride, solid	154	1759
Sodium phenolate, solid	153	2497	Steel swarf	170	2793
Sodium phosphate, dibasic	171	9147	Stibine	119	2676
Sodium phosphate, tribasic	171	9148	Straw, wet, damp or contaminated with oil	133	1327
Sodium phosphide	139	1432	Strontium arsenite	151	1691
Sodium picramate, wetted with not less than 20% water	113	1349	Strontium chlorate	143	1506
Sodium potassium alloys	138	1422	Strontium chlorate, solid	143	1506
Sodium selenite	151	2630	Strontium chlorate, solution	143	1506
Sodium silicofluoride	154	2674	Strontium chromate	171	9149
Sodium sulfide, anhydrous	135	1385	Strontium nitrate	140	1507
Sodium sulfide, hydrated, with not less than 30% water	153	1849	Strontium perchlorate	140	1508
Sodium sulfide, with less than 30% water of crystallization	135	1385	Strontium peroxide	143	1509
Sodium sulphide, anhydrous	135	1385	Strontium phosphide	139	2013
Sodium sulphide, hydrated, with not less than 30% water	153	1849	Strychnine	151	1692
Sodium sulphide, with less than 30% water of crystallization	135	1385	Strychnine salts	151	1692
Sodium superoxide	143	2547	Styrene monomer, inhibited	128P	2055
Solids containing corrosive liquid, n.o.s.	154	3244	Substances, which in contact with water emit flammable gases, liquid, corrosive, n.o.s.	138	3129
Solids containing flammable liquid, n.o.s.	133	3175	Substances, which in contact with water emit flammable gases, liquid, n.o.s.	138	3148
Solids containing poisonous liquid, n.o.s.	151	3243	Substances, which in contact with water emit flammable gases, liquid, poisonous, n.o.s.	139	3130
Solids containing toxic liquid, n.o.s.	151	3243	Substances, which in contact with water emit flammable gases, liquid, toxic, n.o.s.	139	3130
Soman	153	2810	Substances, which in contact with water emit flammable gases, solid, corrosive, n.o.s.	138	3131
Spirits of Nitroglycerin, not exceeding 1% Nitroglycerin	127	1204	Substances, which in contact with water emit flammable gases, solid, flammable, n.o.s.	138	3132
Stannic chloride, anhydrous	137	1827			
Stannic chloride, pentahydrate	154	2440			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Substances, which in contact with water emit flammable gases, solid, n.o.s.	138	2813	Sulfur	133	1350
Substances, which in contact with water emit flammable gases, solid, oxidizing, n.o.s.	138	3133	Sulfur, molten	133	2448
Substances, which in contact with water emit flammable gases, solid, poisonous, n.o.s.	139	3134	Sulfur chlorides	137	1828
Substances, which in contact with water emit flammable gases, solid, self-heating, n.o.s.	138	3135	Sulfur dioxide	125	1079
Substituted nitrophenol pesticide, liquid, flammable, poisonous	131	2780	Sulfur dioxide, liquefied	125	1079
Substituted nitrophenol pesticide, liquid, flammable, toxic	131	2780	Sulfur hexafluoride	126	1080
Substituted nitrophenol pesticide, liquid, poisonous, flammable	131	3013	Sulfuric acid	137	1830
Substituted nitrophenol pesticide, liquid, toxic	153	3014	Sulfuric acid, fuming	137	1831
Substituted nitrophenol pesticide, solid, poisonous	153	2779	Sulfuric acid, fuming, with less than 30% free Sulfur trioxide	137	1831
Succinic acid peroxide	146	2135	Sulfuric acid, fuming, with not less than 30% free Sulfur trioxide	137	1831
Sulfamic acid	154	2967	Sulfuric acid, spent	137	1832
			Sulfuric acid, with more than 51% acid	137	1830
			Sulfuric acid, with not more than 51% acid	157	2796
			Sulfuric acid and Hydrofluoric acid mixtures	157	1786
			Sulfurous acid	154	1833
			Sulfur tetrafluoride	125	2418
			Sulfur trioxide	137	1829
			Sulfur trioxide, inhibited	137	1829
			Sulfur trioxide, stabilized	137	1829
			Sulfur trioxide, uninhibited	137	1829
			Sulfur trioxide and Chlorosulfonic acid mixture	137	1754
			Sulfuryl chloride	137	1834
			Sulfuryl fluoride	123	2191
			Sulphamic acid	154	2967
			Sulphur	133	1350
			Sulphur, molten	133	2448
			Sulphur chlorides	137	1828
			Sulphur dioxide	125	1079

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Sulphur dioxide, liquefied	125	1079	Tear gas substance, solid, n.o.s.	159	1693
Sulphur hexafluoride	126	1080	Tellurium compound, n.o.s.	151	3284
Sulphuric acid	137	1830	Tellurium hexafluoride	125	2195
Sulphuric acid, fuming	137	1831	Terpene hydrocarbons, n.o.s.	128	2319
Sulphuric acid, fuming, with less than 30% free Sulphur trioxide	137	1831	Terpinolene	128	2541
Sulphuric acid, fuming, with not less than 30% free Sulphur trioxide	137	1831	Tetrabromoethane	159	2504
Sulphuric acid, spent	137	1832	1,1,2,2-Tetrachloroethane	151	1702
Sulphuric acid, with more than 51% acid	137	1830	Tetrachloroethane	151	1702
Sulphuric acid, with not more than 51% acid	157	2796	Tetrachloroethylene	160	1897
Sulphuric acid and Hydrofluoric acid mixtures	157	1786	Tetraethyl dithiopyrophosphate	153	1704
Sulphurous acid	154	1833	Tetraethyl dithiopyrophosphate, mixture, dry or liquid	153	1704
Sulphur tetrafluoride	125	2418	Tetraethyl dithiopyrophosphate and gases, in solution	123	1703
Sulphur trioxide	137	1829	Tetraethyl dithiopyrophosphate and gases, mixtures	123	1703
Sulphur trioxide, inhibited	137	1829	Tetraethyl dithiopyrophosphate and gases, mixtures, or in solution (LC50 more than 200 ppm but not more than 5000 ppm)	123	1703
Sulphur trioxide, stabilized	137	1829	Tetraethyl dithiopyrophosphate and gases, mixtures, or in solution (LC50 not more than 200 ppm)	123	1703
Sulphur trioxide, uninhibited	137	1829	Tetraethylenepentamine	153	2320
Sulphur trioxide and Chlorosulphonic acid mixture	137	1754	Tetraethyl lead, liquid	131	1649
Sulphuryl chloride	137	1834	Tetraethyl pyrophosphate, liquid	152	2783
Sulphuryl fluoride	123	2191	Tetraethyl pyrophosphate, liquid	152	3018
Tabun	153	2810	Tetraethyl pyrophosphate, solid	152	2783
Tars, liquid	130	1999	Tetraethyl pyrophosphate and compressed gas mixtures	123	1705
TDE (1,1-Dichloro-2,2-bis (p-chlorophenyl)ethane)	151	2761	Tetraethyl pyrophosphate and compressed gas mixtures (LC50 more than 200 ppm but not more than 5000 ppm)	123	1705
Tear gas candles	159	1700			
Tear gas devices	159	1693			
Tear gas grenades	159	1700			
Tear gas substance, liquid, n.o.s.	159	1693			



Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Tetraethyl pyrophosphate and compressed gas mixtures (LC50 not more than 200 ppm)	123	1705	Thallium compound, n.o.s.	151	1707
Tetraethyl pyrophosphate mixture, dry	152	2783	Thallium nitrate	141	2727
Tetraethyl silicate	132	1292	Thallium sulfate, solid	151	1707
1,1,1,2-Tetrafluoroethane	126	3159	Thallium sulphate, solid	151	1707
Tetrafluoroethane and Ethylene oxide mixture, with not more than 5.6% Ethylene oxide	126	3299	4-Thiapentanal	152	2785
Tetrafluoroethylene, inhibited	116P	1081	Thia-4-pentanal	152	2785
Tetrafluoromethane	126	1982	Thickened GD	153	2810
Tetrafluoromethane, compressed	126	1982	Thioacetic acid	129	2436
1,2,3,6-Tetrahydro-benzaldehyde	132	2498	Thiocarbamate pesticide, liquid, flammable, poisonous	131	2772
Tetrahydrofuran	127	2056	Thiocarbamate pesticide, liquid, flammable, toxic	131	2772
Tetrahydrofurfurylamine	129	2943	Thiocarbamate pesticide, liquid, poisonous	151	3006
Tetrahydrophthalic anhydrides	156	2698	Thiocarbamate pesticide, liquid, poisonous, flammable	131	3005
1,2,3,6-Tetrahydropyridine	129	2410	Thiocarbamate pesticide, liquid, toxic	151	3006
1,2,5,6-Tetrahydropyridine	129	2410	Thiocarbamate pesticide, liquid, toxic, flammable	131	3005
Tetrahydrothiophene	129	2412	Thiocarbamate pesticide, solid, poisonous	151	2771
Tetralin hydroperoxide	145	2136	Thiocarbamate pesticide, solid, toxic	151	2771
Tetramethylammonium hydroxide	153	1835	Thioglycol	153	2966
1,1,3,3-Tetramethylbutyl hydroperoxide	145	2160	Thioglycolic acid	153	1940
1,1,3,3-Tetramethylbutyl peroxy-2-ethylhexanoate	148	2161	Thiolactic acid	153	2936
Tetramethylmethylenediamine	132	9069	Thionyl chloride	137	1836
Tetramethylsilane	130	2749	Thiophene	130	2414
Tetranitromethane	143	1510	Thiophosgene	157	2474
Tetrapropyl orthotitanate	128	2413	Thiophosphoryl chloride	157	1837
Textile treating compound or mixture, liquid (corrosive)	154	1760	Thiourea dioxide	135	3341
Thallium chlorate	141	2573	Thiram	151	2771
			Thorium metal, pyrophoric	162	2975
			Thorium nitrate, solid	162	2976

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Tinctures, medicinal	127	1293	Toluene sulfonic acid, solid, with more than 5% free Sulfuric acid	153	2583
Tin tetrachloride	137	1827	Toluene sulfonic acid, solid, with not more than 5% free Sulfuric acid	153	2585
Tin tetrachloride, pentahydrate	154	2440	Toluene sulphonic acid, liquid, with more than 5% free Sulphuric acid	153	2584
Titanium disulfide	135	3174	Toluene sulphonic acid, liquid, with not more than 5% free Sulphuric acid	153	2586
Titanium disulphide	135	3174	Toluene sulphonic acid, solid, with more than 5% free Sulphuric acid	153	2583
Titanium hydride	170	1871	Toluene sulphonic acid, solid, with not more than 5% free Sulphuric acid	153	2585
Titanium powder, dry	135	2546	Toluidines	153	1708
Titanium powder, wetted with not less than 25% water	170	1352	Toluidines, liquid	153	1708
Titanium sponge granules	170	2878	Toluidines, solid	153	1708
Titanium sponge powders	170	2878	2,4-Toluylenediamine	151	1709
Titanium sulfate, solution	154	1760	Toxaphene	151	2761
Titanium sulphate, solution	154	1760	Toxic liquid, corrosive, inorganic, n.o.s.	154	3289
Titanium tetrachloride	137	1838	Toxic liquid, corrosive, inorganic, n.o.s. (Inhalation Hazard Zone A)	154	3289
Titanium tetrachloride and Vanadium oxytrichloride, mixture	137	2443	Toxic liquid, corrosive, inorganic, n.o.s. (Inhalation Hazard Zone B)	154	3289
Titanium trichloride, pyrophoric	135	2441	Toxic liquid, corrosive, organic, n.o.s.	154	2927
Titanium trichloride mixture	157	2869	Toxic liquid, corrosive, organic, n.o.s. (Inhalation Hazard Zone A)	154	2927
Titanium trichloride mixture, pyrophoric	135	2441	Toxic liquid, corrosive, organic, n.o.s. (Inhalation Hazard Zone B)	154	2927
TNT, wetted with not less than 30% water	113	1356			
Toe puffs, nitrocellulose base	133	1353			
Toluene	130	1294			
2,4-Toluenediamine	151	1709			
Toluenediamine	151	1709			
Toluene diisocyanate	156	2078			
Toluene sulfonic acid, liquid, with more than 5% free Sulfuric acid	153	2584			
Toluene sulfonic acid, liquid, with not more than 5% free Sulfuric acid	153	2586			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Toxic liquid, flammable, n.o.s.	131	2929	Toxic liquid, water-reactive, n.o.s. (Inhalation Hazard Zone B)	139	3123
Toxic liquid, flammable, n.o.s. (Inhalation Hazard Zone A)	131	2929	Toxic liquid, which in contact with water emits flammable gases, n.o.s.	139	3123
Toxic liquid, flammable, n.o.s. (Inhalation Hazard Zone B)	131	2929	Toxic liquid, which in contact with water emits flammable gases, n.o.s. (Inhalation Hazard Zone A)	139	3123
Toxic liquid, flammable, organic, n.o.s.	131	2929	Toxic liquid, which in contact with water emits flammable gases, n.o.s. (Inhalation Hazard Zone B)	139	3123
Toxic liquid, flammable, organic, n.o.s. (Inhalation Hazard Zone A)	131	2929	Toxic solid, corrosive, inorganic, n.o.s.	154	3290
Toxic liquid, flammable, organic, n.o.s. (Inhalation Hazard Zone B)	131	2929	Toxic solid, corrosive, organic, n.o.s.	154	2928
Toxic liquid, inorganic, n.o.s.	151	3287	Toxic solid, flammable, n.o.s.	134	2930
Toxic liquid, inorganic, n.o.s. (Inhalation Hazard Zone A)	151	3287	Toxic solid, flammable, organic, n.o.s.	134	2930
Toxic liquid, inorganic, n.o.s. (Inhalation Hazard Zone B)	151	3287	Toxic solid, inorganic, n.o.s.	151	3288
Toxic liquid, n.o.s.	153	2810	Toxic solid, n.o.s.	154	2811
Toxic liquid, n.o.s. (Inhalation Hazard Zone A)	153	2810	Toxic solid, organic, n.o.s.	154	2811
Toxic liquid, n.o.s. (Inhalation Hazard Zone B)	153	2810	Toxic solid, oxidizing, n.o.s.	141	3086
Toxic liquid, organic, n.o.s.	153	2810	Toxic solid, self-heating, n.o.s.	136	3124
Toxic liquid, organic, n.o.s. (Inhalation Hazard Zone A)	153	2810	Toxic solid, water-reactive, n.o.s.	139	3125
Toxic liquid, organic, n.o.s. (Inhalation Hazard Zone B)	153	2810	Toxic solid, which in contact with water emits flammable gases, n.o.s.	139	3125
Toxic liquid, oxidizing, n.o.s.	142	3122	Toxins	153	—
Toxic liquid, oxidizing, n.o.s. (Inhalation Hazard Zone A)	142	3122	Toxins, extracted from living sources, liquid, n.o.s.	153	3172
Toxic liquid, oxidizing, n.o.s. (Inhalation Hazard Zone B)	142	3122	Toxins, extracted from living sources, n.o.s.	153	3172
Toxic liquid, water-reactive, n.o.s.	139	3123	Toxins, extracted from living sources, solid, n.o.s.	153	3172
Toxic liquid, water-reactive, n.o.s. (Inhalation Hazard Zone A)	139	3123			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Triallylamine	132	2610	Trichlorosilane	139	1295
Triallyl borate	156	2609	Trichloro-s-triazinetrione, dry	140	2468
Triazine pesticide, liquid, flammable, poisonous	131	2764	(mono)-(Trichloro)-tetra-(monopotassium dichloro)-penta-s-triazinetrione, dry	140	2468
Triazine pesticide, liquid, flammable, toxic	131	2764	Tricresyl phosphate	151	2574
Triazine pesticide, liquid, poisonous	151	2998	Triethanolamine dodecylbenzenesulfonate	171	9151
Triazine pesticide, liquid, poisonous, flammable	131	2997	Triethanolamine dodecylbenzenesulphonate	171	9151
Triazine pesticide, liquid, toxic	151	2998	Triethylamine	132	1296
Triazine pesticide, liquid, toxic, flammable	131	2997	Triethylenetetramine	153	2259
Triazine pesticide, solid, poisonous	151	2763	Triethyl phosphite	129	2323
Triazine pesticide, solid, toxic	151	2763	Trifluoroacetic acid	154	2699
Tri-(1-aziridinyl)phosphine oxide, solution	152	2501	Trifluoroacetyl chloride	125	3057
Tributylamine	153	2542	Trifluorochloroethylene	119P	1082
Tributylphosphane	135	3254	Trifluorochloroethylene, inhibited	119P	1082
Tributylphosphine	135	3254	1,1,1-Trifluoroethane	115	2035
Trichlorfon	152	2783	Trifluoroethane, compressed	115	2035
Trichloroacetic acid	153	1839	Trifluoromethane	126	1984
Trichloroacetic acid, solution	153	2564	Trifluoromethane, refrigerated liquid	120	3136
Trichloroacetyl chloride	156	2442	Trifluoromethane and Chlorotrifluoromethane azeotropic mixture with approximately 60% Chlorotrifluoromethane	126	2599
Trichlorobenzenes, liquid	153	2321	2-Trifluoromethylaniline	153	2942
Trichlorobutene	152	2322	3-Trifluoromethylaniline	153	2948
1,1,1-Trichloroethane	160	2831	Triisobutylene	128	2324
Trichloroethylene	160	1710	Triisocyanatoisocyanurate of Isophoronediiisocyanate, solution (70%)	127	2906
Trichloroisocyanuric acid, dry	140	2468	Triisopropyl borate	129	2616
Trichlorophenol	153	2020	Trimethoxysilane	132	9269
2,4,5-Trichlorophenoxyacetic acid	152	2765			
2,4,5-Trichlorophenoxypropionic acid	152	2765			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Trimethylacetyl chloride	132	2438	Uranium hexafluoride, low specific activity	166	2978
Trimethylamine, anhydrous	118	1083	Uranium hexafluoride, non-fissile	166	2978
Trimethylamine, aqueous solution	132	1297	Uranium metal, pyrophoric	162	2979
1,3,5-Trimethylbenzene	129	2325	Uranyl acetate	162	9180
Trimethyl borate	129	2416	Uranyl nitrate, hexahydrate, solution	162	2980
Trimethylchlorosilane	155	1298	Uranyl nitrate, solid	162	2981
Trimethylcyclohexylamine	153	2326	Urea hydrogen peroxide	140	1511
Trimethylhexamethylenediamines	153	2327	Urea nitrate, wetted with not less than 20% water	113	1357
Trimethylhexamethylene diisocyanate	156	2328	Urea peroxide	140	1511
Trimethyl phosphite	129	2329	Valeraldehyde	129	2058
Trinitroaniline, wetted	113	9073	Valeryl chloride	132	2502
Trinitrobenzene, wetted with not less than 30% water	113	1354	Vanadium compound, n.o.s.	151	3285
Trinitrobenzoic acid, wetted with not less than 30% water	113	1355	Vanadium oxytrichloride	137	2443
Trinitrophenol, wetted with not less than 30% water	113	1344	Vanadium oxytrichloride and Titanium tetrachloride, mixture	137	2443
Trinitrotoluene, wetted with not less than 30% water	113	1356	Vanadium pentoxide	151	2862
Tripropylamine	132	2260	Vanadium tetrachloride	137	2444
Tripropylene	128	2057	Vanadium trichloride	157	2475
Tris-(1-aziridinyl)phosphine oxide, solution	152	2501	Vanadium trioxide	154	2860
Tris-(2-chloroethyl) amine	153	2810	Vanadyl sulfate	151	2931
Tungsten hexafluoride	125	2196	Vanadyl sulphate	151	2931
Turpentine	128	1299	Vehicle, flammable gas powered	128	3166
Turpentine substitute	128	1300	Vehicle, flammable liquid powered	128	3166
Undecane	128	2330	Vinyl acetate	129P	1301
Uranium hexafluoride, fissile containing more than 1% Uranium-235	166	2977	Vinyl acetate, inhibited	129P	1301
Uranium hexafluoride, fissile-excepted	166	2978	Vinyl bromide, inhibited	116P	1085
			Vinyl butyrate, inhibited	129P	2838
			Vinyl chloride	116P	1086
			Vinyl chloride, inhibited	116P	1086

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Vinyl chloride, stabilized	116P	1086	Waste Type 19	154	9319
Vinyl chloroacetate	155	2589	Waste Type 20	154	9320
Vinyl ethyl ether	127P	1302	Waste Type 21	154	9321
Vinyl ethyl ether, inhibited	127P	1302	Waste Type 22	154	9322
Vinyl fluoride, inhibited	116P	1860	Waste Type 23	154	9323
Vinylidene chloride, inhibited	129P	1303	Waste Type 24	152	9324
Vinyl isobutyl ether	127P	1304	Waste Type 25	127	9325
Vinyl isobutyl ether, inhibited	127P	1304	Waste Type 26	152	9326
Vinyl methyl ether	116P	1087	Waste Type 27	131	9327
Vinyl methyl ether, inhibited	116P	1087	Waste Type 28	131	9328
Vinylpyridines, inhibited	131P	3073	Waste Type 29	153	9329
Vinyltoluenes, inhibited	130P	2618	Waste Type 30	153	9330
Vinyltrichlorosilane	155	1305	Waste Type 31	129	9331
Vinyltrichlorosilane, inhibited	155	1305	Waste Type 32	129	9332
VX	153	2810	Waste Type 33	129	9333
Waste Type 1	153	9301	Waste Type 34	129	9334
Waste Type 2	153	9302	Waste Type 35	153	9335
Waste Type 3	131	9303	Waste Type 36	153	9336
Waste Type 4	153	9304	Waste Type 37	153	9337
Waste Type 5	131	9305	Waste Type 38	153	9338
Waste Type 6	154	9306	Waste Type 39	153	9339
Waste Type 7	154	9307	Waste Type 40	153	9340
Waste Type 8	153	9308	Waste Type 41	132	9341
Waste Type 9	153	9309	Waste Type 42	129	9342
Waste Type 10	153	9310	Waste Type 43	154	9343
Waste Type 11	153	9311	Waste Type 44	132	9344
Waste Type 12	153	9312	Waste Type 45	132	9345
Waste Type 13	153	9313	Waste Type 46	153	9346
Waste Type 14	153	9314	Waste Type 47	132	9347
Waste Type 15	153	9315	Waste Type 48	153	9348
Waste Type 16	154	9316	Waste Type 49	153	9349
Waste Type 17	154	9317	Waste Type 50	153	9350
Waste Type 18	154	9318	Waste Type 51	153	9351

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Waste Type 52	153	9352	Waste Type 85	154	9385
Waste Type 53	153	9353	Waste Type 86	154	9386
Waste Type 54	153	9354	Waste Type 87	154	9387
Waste Type 55	153	9355	Waste Type 88	151	9388
Waste Type 56	153	9356	Waste Type 89	154	9389
Waste Type 57	153	9357	Waste Type 90	154	9390
Waste Type 58	153	9358	Waste Type 91	153	9391
Waste Type 59	151	9359	Waste Type 92	154	9392
Waste Type 60	132	9360	Waste Type 93	153	9393
Waste Type 61	151	9361	Waste Type 94	151	9394
Waste Type 62	151	9362	Waste Type 95	153	9395
Waste Type 63	151	9363	Waste Type 96	151	9396
Waste Type 64	151	9364	Waste Type 97	153	9397
Waste Type 65	151	9365	Waste Type 99	137	9399
Waste Type 66	151	9366	Waste Type 100	137	9400
Waste Type 67	152	9367	Water pump system	126	1956
Waste Type 68	154	9368	Water-reactive liquid, corrosive, n.o.s.	138	3129
Waste Type 69	151	9369	Water-reactive liquid, n.o.s.	138	3148
Waste Type 70	151	9370	Water-reactive liquid, poisonous, n.o.s.	139	3130
Waste Type 71	133	9371	Water-reactive liquid, toxic, n.o.s.	139	3130
Waste Type 72	151	9372	Water-reactive solid, corrosive, n.o.s.	138	3131
Waste Type 73	151	9373	Water-reactive solid, flammable, n.o.s.	138	3132
Waste Type 74	127	9374	Water-reactive solid, n.o.s.	138	2813
Waste Type 75	153	9375	Water-reactive solid, oxidizing, n.o.s.	138	3133
Waste Type 76	153	9376	Water-reactive solid, poisonous, n.o.s.	139	3134
Waste Type 77	131	9377	Water-reactive solid, self- heating, n.o.s.	138	3135
Waste Type 78	153	9378	Water-reactive solid, toxic, n.o.s.	139	3134
Waste Type 79	153	9379			
Waste Type 80	151	9380			
Waste Type 81	154	9381			
Waste Type 82	154	9382			
Waste Type 83	154	9383			
Waste Type 84	151	9384			

Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Water-reactive substances, liquid, corrosive, n.o.s.	138	3129	Xylenes	130	1307
Water-reactive substances, liquid, n.o.s.	138	3148	Xylenols	153	2261
Water-reactive substances, liquid, poisonous, n.o.s.	139	3130	Xylidines	153	1711
Water-reactive substances, liquid, toxic, n.o.s.	139	3130	Xylyl bromide	152	1701
Water-reactive substances, solid, corrosive, n.o.s.	138	3131	Yellow phosphorus, dry	136	1381
Water-reactive substances, solid, flammable, n.o.s.	138	3132	Yellow phosphorus, in solution	136	1381
Water-reactive substances, solid, n.o.s.	138	2813	Yellow phosphorus, molten	136	2447
Water-reactive substances, solid, oxidizing, n.o.s.	138	3133	Yellow phosphorus, under water	136	1381
Water-reactive substances, solid, poisonous, n.o.s.	139	3134	Zinc acetate	171	9153
Water-reactive substances, solid, self-heating, n.o.s.	138	3135	Zinc ammonium chloride	171	9154
Water-reactive substances, solid, toxic, n.o.s.	139	3134	Zinc ammonium nitrite	140	1512
Wheelchair, electric, with batteries	154	3171	Zinc arsenate	151	1712
White asbestos	171	2590	Zinc arsenate and Zinc arsenite mixture	151	1712
White phosphorus, dry	136	1381	Zinc arsenite	151	1712
White phosphorus, in solution	136	1381	Zinc arsenite and Zinc arsenate mixture	151	1712
White phosphorus, molten	136	2447	Zinc ashes	138	1435
White phosphorus, under water	136	1381	Zinc bisulfite solution	154	2693
Wood preservatives, liquid	129	1306	Zinc bisulphite solution	154	2693
Wool waste, wet	133	—	Zinc borate	171	9155
Xanthates	135	3342	Zinc bromate	140	2469
Xenon	121	2036	Zinc bromide	171	9156
Xenon, compressed	121	2036	Zinc carbonate	171	9157
Xenon, refrigerated liquid (cryogenic liquid)	120	2591	Zinc chlorate	140	1513
			Zinc chloride, anhydrous	154	2331
			Zinc chloride, solution	154	1840
			Zinc cyanide	151	1713
			Zinc dithionite	171	1931
			Zinc dross	138	1435
			Zinc dust	138	1436
			Zinc fluoride	151	9158
			Zinc fluorosilicate	151	2855



Name of Material	Guide No.	ID No.	Name of Material	Guide No.	ID No.
Zinc formate	171	9159	Zirconium sulfate	171	9163
Zinc hydrosulfite	171	1931	Zirconium sulphate	171	9163
Zinc hydrosulphite	171	1931	Zirconium suspended in a flammable liquid	170	1308
Zinc nitrate	140	1514	Zirconium suspended in a liquid (flammable)	170	1308
Zinc permanganate	140	1515	Zirconium tetrachloride	137	2503
Zinc peroxide	143	1516			
Zinc phenolsulfonate	171	9160			
Zinc phenolsulphonate	171	9160			
Zinc phosphide	139	1714			
Zinc powder	138	1436			
Zinc residue	138	1435			
Zinc resinate	133	2714			
Zinc selenate	151	2630			
Zinc selenite	151	2630			
Zinc silicofluoride	151	2855			
Zinc skimmings	138	1435			
Zinc sulfate	171	9161			
Zinc sulphate	171	9161			
Zirconium, dry, coiled wire, finished metal sheets or strips	170	2858			
Zirconium, dry, finished sheets, strips or coiled wire	135	2009			
Zirconium hydride	138	1437			
Zirconium metal, liquid, suspension	170	1308			
Zirconium metal, powder, wet	170	1358			
Zirconium nitrate	140	2728			
Zirconium picramate, wetted with not less than 20% water	113	1517			
Zirconium potassium fluoride	171	9162			
Zirconium powder, dry	135	2008			
Zirconium powder, wetted with not less than 25% water	170	1358			
Zirconium scrap	135	1932			

## NOTES

# GUIDES

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- May explode from heat, shock, friction or contamination.
- May react violently or explosively on contact with air, water or foam.
- May be ignited by heat, sparks or flames.
- Vapors may travel to source of ignition and flash back.
- Containers may explode when heated.
- Ruptured cylinders may rocket.

**HEALTH**

- Inhalation, ingestion or contact with substance may cause severe injury, infection, disease or death.
- High concentration of gas may cause asphyxiation without warning.
- Contact may cause burns to skin and eyes.
- Fire or contact with water may produce irritating, toxic and/or corrosive gases.
- Runoff from fire control may cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 100 to 200 meters (330 to 660 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it may not be effective in spill situations.

**EVACUATION****Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

**CAUTION:** Material may react with extinguishing agent.

**Small Fires**

- Dry chemical, CO<sub>2</sub>, water spray or regular foam.

**Large Fires**

- Water spray, fog or regular foam.
- Move containers from fire area if you can do it without risk.

**Fire involving Tanks**

- Cool containers with flooding quantities of water until well after fire is out.
- Do not get water inside containers.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- Do not touch or walk through spilled material.
- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Keep combustibles (wood, paper, oil, etc.) away from spilled material.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- Prevent entry into waterways, sewers, basements or confined areas.

**Small Spills** • Take up with sand or other noncombustible absorbent material and place into containers for later disposal.

**Large Spills** • Dike far ahead of liquid spill for later disposal.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- **Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.**
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Shower and wash with soap and water.
- Keep victim warm and quiet.
- Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- MAY EXPLODE AND THROW FRAGMENTS 1600 meters (1 MILE) OR MORE IF FIRE REACHES CARGO.
- For information on "Compatibility Group" letters, refer to Glossary section.

**HEALTH**

- Fire may produce irritating, corrosive and/or toxic gases.

**PUBLIC SAFETY**

- CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
- Isolate spill or leak area immediately for at least 500 meters (1/3 mile) in all directions.
- Move people out of line of sight of the scene and away from windows.
- Keep unauthorized personnel away.
- Stay upwind.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

**EVACUATION****Large Spill**

- Consider initial evacuation for 800 meters (1/2 mile) in all directions.

**Fire**

- If rail car or trailer is involved in a fire and heavily encased explosives such as bombs or artillery projectiles are suspected, ISOLATE for 1600 m (1 mile) in all directions; also, initiate evacuation including emergency responders for 1600 m (1 mile) in all directions.
- When heavily encased explosives are not involved, evacuate the area for 800 meters (1/2 mile) in all directions.

\* For information on "Compatibility Group" letters, refer to the Glossary section.

**EMERGENCY RESPONSE****FIRE****CARGO Fires**

- **DO NOT fight fire when fire reaches cargo! Cargo may EXPLODE!**
- Stop all traffic and clear the area for at least 1600 meters (1 mile) in all directions and let burn.
- Do not move cargo or vehicle if cargo has been exposed to heat.

**TIRE or VEHICLE Fires**

- **Use plenty of water - FLOOD it! If water is not available, use CO<sub>2</sub>, dry chemical or dirt.**
- If possible, and WITHOUT RISK, use unmanned hose holders or monitor nozzles from maximum distance to prevent fire from spreading to cargo area.
- Pay special attention to tire fires as re-ignition may occur. Stand by with extinguisher ready.

**SPILL OR LEAK**

- **ELIMINATE** all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Do not touch or walk through spilled material.
- **DO NOT OPERATE RADIO TRANSMITTERS WITHIN 100 meters (330 feet) OF ELECTRIC DETONATORS.**
- **DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST.**

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

\* For information on "Compatibility Group" letters, refer to the Glossary section.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- Flammable/combustible material.
- May be ignited by heat, sparks or flames.
- **DRIED OUT material may explode if exposed to heat, flame, friction or shock; Treat as an explosive (GUIDE 112).**
- **Keep material wet with water or treat as an explosive (Guide 112).**
- Runoff to sewer may create fire or explosion hazard.

**HEALTH**

- Some are toxic and may be fatal if inhaled, swallowed or absorbed through skin.
- Contact may cause burns to skin and eyes.
- Fire may produce irritating, corrosive and/or toxic gases.
- Runoff from fire control or dilution water may cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 100 meters (330 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

**EVACUATION****Large Spill**

- Consider initial evacuation for 500 meters (1/3 mile) in all directions.

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.



**EMERGENCY RESPONSE****FIRE****CARGO Fires**

- **DO NOT fight fire when fire reaches cargo! Cargo may EXPLODE!**
- Stop all traffic and clear the area for at least 800 meters (1/2 mile) in all directions and let burn.
- Do not move cargo or vehicle if cargo has been exposed to heat.

**TIRE or VEHICLE Fires**

- Use plenty of water - FLOOD it! If water is not available, use CO<sub>2</sub>, dry chemical or dirt.
- If possible, and WITHOUT RISK, use unmanned hose holders or monitor nozzles from maximum distance to prevent fire from spreading to cargo area.
- Pay special attention to tire fires as re-ignition may occur. Stand by with extinguisher ready.

**SPILL OR LEAK**

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Do not touch or walk through spilled material.

**Small Spills**

- Flush area with flooding quantities of water.

**Large Spills**

- Wet down with water and dike for later disposal.
- KEEP "WETTED" PRODUCT WET BY SLOWLY ADDING FLOODING QUANTITIES OF WATER.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- **MAY EXPLODE AND THROW FRAGMENTS 500 meters (1/3 MILE) OR MORE IF FIRE REACHES CARGO.**
- For information on "Compatibility Group" letters, refer to Glossary section.

**HEALTH**

- Fire may produce irritating, corrosive and/or toxic gases.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 100 meters (330 feet) in all directions.
- Move people out of line of sight of the scene and away from windows.
- Keep unauthorized personnel away.
- Stay upwind.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

**EVACUATION****Large Spill**

- Consider initial evacuation for 250 meters (800 feet) in all directions.

**Fire**

- If rail car or trailer is involved in a fire, ISOLATE for 500 meters (1/3 mile) in all directions; also initiate evacuation including emergency responders for 500 meters (1/3 mile) in all directions.

\* For information on "Compatibility Group" letters, refer to the Glossary section.

**EMERGENCY RESPONSE****FIRE****CARGO Fires**

- **DO NOT fight fire when fire reaches cargo! Cargo may EXPLODE!**
- Stop all traffic and clear the area for at least 500 meters (1/3 mile) in all directions and let burn.
- Do not move cargo or vehicle if cargo has been exposed to heat.

**TIRE or VEHICLE Fires**

- Use plenty of water - **FLOOD it!** If water is not available, use CO<sub>2</sub>, dry chemical or dirt.
- If possible, and **WITHOUT RISK**, use unmanned hose holders or monitor nozzles from maximum distance to prevent fire from spreading to cargo area.
- Pay special attention to tire fires as re-ignition may occur. Stand by with extinguisher ready.

**SPILL OR LEAK**

- **ELIMINATE** all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Do not touch or walk through spilled material.
- **DO NOT OPERATE RADIO TRANSMITTERS WITHIN 100 meters (330 feet) OF ELECTRIC DETONATORS.**
- **DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST.**

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**SUPPLEMENTAL INFORMATION**

- Packages bearing the 1.4S label or packages containing material classified as 1.4S are designed or packaged in such a manner that when involved in a fire, may burn vigorously with localized detonations and projection of fragments.
- Effects are usually confined to immediate vicinity of packages.
- If fire threatens cargo area containing packages bearing the 1.4S label or packages containing material classified as 1.4S, consider isolating at least 15 meters (50 feet) in all directions. Fight fire with normal precautions from a reasonable distance.

\* For information on "Compatibility Group" letters, refer to the Glossary section.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- **EXTREMELY FLAMMABLE.**
- Will be easily ignited by heat, sparks or flames.
- Will form explosive mixtures with air.
- Vapors from liquefied gas are initially heavier than air and spread along ground.
- Vapors may travel to source of ignition and flash back.
- Containers may explode when heated.
- Ruptured cylinders may rocket.

**HEALTH**

- Vapors may cause dizziness or asphyxiation without warning.
- Some may be irritating if inhaled at high concentrations.
- Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite.
- Fire may produce irritating and/or toxic gases.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 50 to 100 meters (160 to 330 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Keep out of low areas.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.
- Always wear thermal protective clothing when handling refrigerated/cryogenic liquids.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 800 meters (1/2 mile).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 1600 meters (1 mile) in all directions; also, consider initial evacuation for 1600 meters (1 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

- DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.

**Small Fires**

- Dry chemical or CO<sub>2</sub>.

**Large Fires**

- Water spray or fog.
- Move containers from fire area if you can do it without risk.

**Fire involving Tanks**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Do not direct water at source of leak or safety devices; icing may occur.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**SPILL OR LEAK**

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- If possible, turn leaking containers so that gas escapes rather than liquid.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- Do not direct water at spill or source of leak.
- Prevent spreading of vapors through sewers, ventilation systems and confined areas.
- Isolate area until gas has dispersed.

**CAUTION:** When in contact with refrigerated/cryogenic liquids, many materials become brittle and are likely to break without warning.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- Clothing frozen to the skin should be thawed before being removed.
- In case of contact with liquefied gas, thaw frosted parts with lukewarm water.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- **EXTREMELY FLAMMABLE.**
- Will be easily ignited by heat, sparks or flames.
- Will form explosive mixtures with air.
- Silane will ignite spontaneously in air.
- Those substances designated with a "P" may polymerize explosively when heated or involved in a fire.
- Vapors from liquefied gas are initially heavier than air and spread along ground.
- Vapors may travel to source of ignition and flash back.
- Containers may explode when heated.
- Ruptured cylinders may rocket.

**HEALTH**

- Vapors may cause dizziness or asphyxiation without warning.
- Some may be toxic if inhaled at high concentrations.
- Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite.
- Fire may produce irritating and/or toxic gases.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 100 meters (330 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Keep out of low areas.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 800 meters (1/2 mile).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 1600 meters (1 mile) in all directions; also, consider initial evacuation for 1600 meters (1 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

- DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.

**Small Fires**

- Dry chemical or CO<sub>2</sub>.

**Large Fires**

- Water spray or fog.
- Move containers from fire area if you can do it without risk.

**Fire involving Tanks**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Do not direct water at source of leak or safety devices; icing may occur.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**SPILL OR LEAK**

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Stop leak if you can do it without risk.
- Do not touch or walk through spilled material.
- Do not direct water at spill or source of leak.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- If possible, turn leaking containers so that gas escapes rather than liquid.
- Prevent entry into waterways, sewers, basements or confined areas.
- Isolate area until gas has dispersed.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with liquefied gas, thaw frosted parts with lukewarm water.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****HEALTH**

- **TOXIC; Extremely Hazardous.**
- May be fatal if inhaled or absorbed through skin.
- Initial odor may be irritating or foul and may deaden your sense of smell.
- Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite.
- Fire will produce irritating, corrosive and/or toxic gases.
- Runoff from fire control may cause pollution.

**FIRE OR EXPLOSION**

- These materials are extremely flammable.
- May form explosive mixtures with air.
- May be ignited by heat, sparks or flames.
- Vapors from liquefied gas are initially heavier than air and spread along ground.
- Vapors may travel to source of ignition and flash back.
- Runoff may create fire or explosion hazard.
- Containers may explode when heated.
- Ruptured cylinders may rocket.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 100 to 200 meters (330 to 660 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

**EVACUATION****Spill**

- See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 1600 meters (1 mile) in all directions; also, consider initial evacuation for 1600 meters (1 mile) in all directions.



**EMERGENCY RESPONSE****FIRE**

- DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.

**Small Fires**

- Dry chemical, CO<sub>2</sub>, water spray or regular foam.

**Large Fires**

- Water spray, fog or regular foam.
- Move containers from fire area if you can do it without risk.
- Damaged cylinders should be handled only by specialists.

**Fire involving Tanks**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Do not direct water at source of leak or safety devices; icing may occur.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire.
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- Do not direct water at spill or source of leak.
- If possible, turn leaking containers so that gas escapes rather than liquid.
- Prevent entry into waterways, sewers, basements or confined areas.
- Isolate area until gas has dispersed.
- Consider igniting spill or leak to eliminate toxic gas concerns.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- **Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.**
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- In case of contact with liquefied gas, thaw frosted parts with lukewarm water.
- Keep victim warm and quiet. • Keep victim under observation.
- Effects of contact or inhalation may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- **EXTREMELY FLAMMABLE.**
- May be ignited by heat, sparks or flames.
- May form explosive mixtures with air.
- Vapors from liquefied gas are initially heavier than air and spread along ground.
- Vapors may travel to source of ignition and flash back.
- Some of these materials may react violently with water.
- Containers may explode when heated.
- Ruptured cylinders may rocket.

**HEALTH**

- May cause toxic effects if inhaled.
- Vapors are extremely irritating.
- Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite.
- Fire will produce irritating, corrosive and/or toxic gases.
- Runoff from fire control may cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 100 to 200 meters (330 to 660 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 800 meters (1/2 mile).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 1600 meters (1 mile) in all directions; also, consider initial evacuation for 1600 meters (1 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

- **DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.**

**Small Fires**

- Dry chemical or CO<sub>2</sub>.

**Large Fires**

- Water spray, fog or regular foam.
- Move containers from fire area if you can do it without risk.
- Damaged cylinders should be handled only by specialists.

**Fire involving Tanks**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Do not direct water at source of leak or safety devices; icing may occur.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- **ALWAYS** stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- **ELIMINATE** all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire.
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- If possible, turn leaking containers so that gas escapes rather than liquid.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- Do not direct water at spill or source of leak.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- **Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.**
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with liquefied gas, thaw frosted parts with lukewarm water.
- Keep victim warm and quiet. • Keep victim under observation.
- Effects of contact or inhalation may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****HEALTH**

- TOXIC; may be fatal if inhaled or absorbed through skin.
- Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite.
- Fire will produce irritating, corrosive and/or toxic gases.
- Runoff from fire control may cause pollution.

**FIRE OR EXPLOSION**

- Flammable; may be ignited by heat, sparks or flames.
- May form explosive mixtures with air.
- Those substances designated with a "P" may polymerize explosively when heated or involved in a fire.
- Vapors from liquefied gas are initially heavier than air and spread along ground.
- Vapors may travel to source of ignition and flash back.
- Some of these materials may react violently with water.
- Containers may explode when heated.
- Ruptured cylinders may rocket.
- Runoff may create fire or explosion hazard.

**PUBLIC SAFETY**

- CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
- Isolate spill or leak area immediately for at least 100 to 200 meters (330 to 660 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

**EVACUATION****Spill**

- See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 1600 meters (1 mile) in all directions; also, consider initial evacuation for 1600 meters (1 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

- **DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.**

**Small Fires**

- Dry chemical, CO<sub>2</sub>, water spray or alcohol-resistant foam.

**Large Fires**

- Water spray, fog or alcohol-resistant foam.
- **FOR CHLOROSILANES, DO NOT USE WATER;** use AFFF alcohol-resistant medium expansion foam.
- Move containers from fire area if you can do it without risk.
- Damaged cylinders should be handled only by specialists.

**Fire involving Tanks**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Do not direct water at source of leak or safety devices; icing may occur.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- **ALWAYS** stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- **ELIMINATE** all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire.
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Do not direct water at spill or source of leak.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- **FOR CHLOROSILANES,** use AFFF alcohol-resistant medium expansion foam to reduce vapors.
- If possible, turn leaking containers so that gas escapes rather than liquid.
- Prevent entry into waterways, sewers, basements or confined areas.
- Isolate area until gas has dispersed.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- **Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.**
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- In case of contact with liquefied gas, thaw frosted parts with lukewarm water.
- Keep victim warm and quiet. • Keep victim under observation.
- Effects of contact or inhalation may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****HEALTH**

- Vapors may cause dizziness or asphyxiation without warning.
- Vapors from liquefied gas are initially heavier than air and spread along ground.
- Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite.

**FIRE OR EXPLOSION**

- **Non-flammable gases.**
- Containers may explode when heated.
- Ruptured cylinders may rocket.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 25 meters (80 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.
- Always wear thermal protective clothing when handling refrigerated/cryogenic liquids or solids.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 100 meters (330 feet).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

- Use extinguishing agent suitable for type of surrounding fire.
- Move containers from fire area if you can do it without risk.
- Damaged cylinders should be handled only by specialists.

**Fire involving Tanks**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Do not direct water at source of leak or safety devices; icing may occur.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- Do not direct water at spill or source of leak.
- If possible, turn leaking containers so that gas escapes rather than liquid.
- Prevent entry into waterways, sewers, basements or confined areas.
- Allow substance to evaporate.
- Ventilate the area.

**CAUTION:** When in contact with refrigerated/cryogenic liquids, many materials become brittle and are likely to break without warning.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Clothing frozen to the skin should be thawed before being removed.
- In case of contact with liquefied gas, thaw frosted parts with lukewarm water.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****HEALTH**

- Vapors may cause dizziness or asphyxiation without warning.
- Vapors from liquefied gas are initially heavier than air and spread along ground.
- Contact with liquefied gas may cause frostbite.

**FIRE OR EXPLOSION**

- **Non-flammable gases.**
- Containers may explode when heated.
- Ruptured cylinders may rocket.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 10 to 25 meters (30 to 80 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 100 meters (330 feet).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.



**EMERGENCY RESPONSE****FIRE**

- Use extinguishing agent suitable for type of surrounding fire.
- Move containers from fire area if you can do it without risk.
- Damaged cylinders should be handled only by specialists.

**Fire involving Tanks**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Do not direct water at source of leak or safety devices; icing may occur.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- Do not direct water at spill or source of leak.
- If possible, turn leaking containers so that gas escapes rather than liquid.
- Prevent entry into waterways, sewers, basements or confined areas.
- Allow substance to evaporate.
- Ventilate the area.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Clothing frozen to the skin should be thawed before being removed.
- In case of contact with liquefied gas, thaw frosted parts with lukewarm water.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- Substance does not burn but will support combustion.
- Some may react explosively with fuels.
- May ignite combustibles (wood, paper, oil, clothing, etc.).
- Vapors from liquefied gas are initially heavier than air and spread along ground.
- Runoff may create fire or explosion hazard.
- Containers may explode when heated.
- Ruptured cylinders may rocket.

**HEALTH**

- Vapors may cause dizziness or asphyxiation without warning.
- Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite.
- Fire may produce irritating and/or toxic gases.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.
- Always wear thermal protective clothing when handling refrigerated/cryogenic liquids.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 500 meters (1/3 mile).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

- Use extinguishing agent suitable for type of surrounding fire.

**Small Fires**

- Dry chemical or CO<sub>2</sub>.

**Large Fires**

- Water spray, fog or regular foam.
- Move containers from fire area if you can do it without risk.
- Damaged cylinders should be handled only by specialists.

**Fire involving Tanks**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Do not direct water at source of leak or safety devices; icing may occur.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**SPILL OR LEAK**

- Keep combustibles (wood, paper, oil, etc.) away from spilled material.
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- If possible, turn leaking containers so that gas escapes rather than liquid.
- Do not direct water at spill or source of leak.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- Prevent entry into waterways, sewers, basements or confined areas.
- Allow substance to evaporate.
- Isolate area until gas has dispersed.

**CAUTION:** When in contact with refrigerated/cryogenic liquids, many materials become brittle and are likely to break without warning.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- Clothing frozen to the skin should be thawed before being removed.
- In case of contact with liquefied gas, thaw frosted parts with lukewarm water.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****HEALTH**

- **TOXIC; may be fatal if inhaled or absorbed through skin.**
- Vapors may be irritating.
- Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite.
- Fire will produce irritating, corrosive and/or toxic gases.
- Runoff from fire control may cause pollution.

**FIRE OR EXPLOSION**

- Some may burn, but none ignite readily.
- Vapors from liquefied gas are initially heavier than air and spread along ground.
- Containers may explode when heated.
- Ruptured cylinders may rocket.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 100 to 200 meters (330 to 660 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

**EVACUATION****Spill**

- See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE****Small Fires**

- Dry chemical or CO<sub>2</sub>.

**Large Fires**

- Water spray, fog or regular foam.
- Do not get water inside containers.
- Move containers from fire area if you can do it without risk.
- Damaged cylinders should be handled only by specialists.

**Fire involving Tanks**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Do not direct water at source of leak or safety devices; icing may occur.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire.
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- If possible, turn leaking containers so that gas escapes rather than liquid.
- Prevent entry into waterways, sewers, basements or confined areas.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- Do not direct water at spill or source of leak.
- Isolate area until gas has dispersed.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- **Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.**
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with liquefied gas, thaw frosted parts with lukewarm water.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Keep victim warm and quiet. • Keep victim under observation.
- Effects of contact or inhalation may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****HEALTH**

- **TOXIC**; may be fatal if inhaled or absorbed through skin.
- Fire will produce irritating, corrosive and/or toxic gases.
- Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite.
- Runoff from fire control may cause pollution.

**FIRE OR EXPLOSION**

- Substance does not burn but will support combustion.
- Vapors from liquefied gas are initially heavier than air and spread along ground.
- These are strong oxidizers and will react vigorously or explosively with many materials including fuels.
- May ignite combustibles (wood, paper, oil, clothing, etc.).
- Some will react violently with air, moist air and/or water.
- Containers may explode when heated.
- Ruptured cylinders may rocket.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 100 to 200 meters (330 to 660 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations **ONLY**; it is not effective in spill situations.

**EVACUATION****Spill**

- See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

**Fire**

- If tank, rail car or tank truck is involved in a fire, **ISOLATE** for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

**Small Fires:** Water only; no dry chemical, CO<sub>2</sub> or Halon® .

- Contain fire and let burn. If fire must be fought, water spray or fog is recommended.
- Do not get water inside containers.
- Move containers from fire area if you can do it without risk.
- Damaged cylinders should be handled only by specialists.

**Fire involving Tanks**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Do not direct water at source of leak or safety devices; icing may occur.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**SPILL OR LEAK**

- Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire.
- Do not touch or walk through spilled material.
- Keep combustibles (wood, paper, oil, etc.) away from spilled material.
- Stop leak if you can do it without risk.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- Do not direct water at spill or source of leak.
- If possible, turn leaking containers so that gas escapes rather than liquid.
- Prevent entry into waterways, sewers, basements or confined areas.
- Isolate area until gas has dispersed.
- Ventilate the area.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
- Administer oxygen if breathing is difficult.
- Clothing frozen to the skin should be thawed before being removed.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Keep victim warm and quiet. • Keep victim under observation.
- Effects of contact or inhalation may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****HEALTH**

- **TOXIC**; may be fatal if inhaled.
- Vapors are extremely irritating and corrosive.
- Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite.
- Fire will produce irritating, corrosive and/or toxic gases.
- Runoff from fire control may cause pollution.

**FIRE OR EXPLOSION**

- Some may burn, but none ignite readily.
- Vapors from liquefied gas are initially heavier than air and spread along ground.
- Some of these materials may react violently with water.
- Containers may explode when heated.
- Ruptured cylinders may rocket.

**PUBLIC SAFETY**

- **CALL** Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
- Isolate spill or leak area immediately for at least 100 to 200 meters (330 to 660 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations **ONLY**; it is not effective in spill situations.

**EVACUATION****Spill**

- See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

**Fire**

- If tank, rail car or tank truck is involved in a fire, **ISOLATE** for 1600 meters (1 mile) in all directions; also, consider initial evacuation for 1600 meters (1 mile) in all directions.



**EMERGENCY RESPONSE****FIRE****Small Fires**

- Dry chemical or CO<sub>2</sub>.

**Large Fires**

- Water spray, fog or regular foam.
- Move containers from fire area if you can do it without risk.
- Do not get water inside containers.
- Damaged cylinders should be handled only by specialists.

**Fire Involving Tanks**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Do not direct water at source of leak or safety devices; icing may occur.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire.
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- If possible, turn leaking containers so that gas escapes rather than liquid.
- Prevent entry into waterways, sewers, basements or confined areas.
- Do not direct water at spill or source of leak.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- Isolate area until gas has dispersed.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- **Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.**
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with liquefied gas, thaw frosted parts with lukewarm water.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Keep victim warm and quiet. • Keep victim under observation.
- Effects of contact or inhalation may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- Some may burn, but none ignite readily.
- Containers may explode when heated.
- Ruptured cylinders may rocket.

**HEALTH**

- Vapors may cause dizziness or asphyxiation without warning.
- Vapors from liquefied gas are initially heavier than air and spread along ground.
- Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite.
- Fire may produce irritating, corrosive and/or toxic gases.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 100 meters (330 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 500 meters (1/3 mile).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

- Use extinguishing agent suitable for type of surrounding fire.

**Small Fires**

- Dry chemical or CO<sub>2</sub>.

**Large Fires**

- Water spray, fog or regular foam.
- Move containers from fire area if you can do it without risk.
- Damaged cylinders should be handled only by specialists.

**Fire involving Tanks**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Do not direct water at source of leak or safety devices; icing may occur.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.
- Some of these materials, if spilled, may evaporate leaving a flammable residue.

**SPILL OR LEAK**

- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Do not direct water at spill or source of leak.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- If possible, turn leaking containers so that gas escapes rather than liquid.
- Prevent entry into waterways, sewers, basements or confined areas.
- Allow substance to evaporate.
- Ventilate the area.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with liquefied gas, thaw frosted parts with lukewarm water.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- **HIGHLY FLAMMABLE:** Will be easily ignited by heat, sparks or flames.
- Vapors may form explosive mixtures with air.
- Vapors may travel to source of ignition and flash back.
- Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Vapor explosion hazard indoors, outdoors or in sewers.
- Those substances designated with a "P" may polymerize explosively when heated or involved in a fire.
- Runoff to sewer may create fire or explosion hazard.
- Containers may explode when heated.
- Many liquids are lighter than water.

**HEALTH**

- Inhalation or contact with material may irritate or burn skin and eyes.
- Fire may produce irritating, corrosive and/or toxic gases.
- Vapors may cause dizziness or suffocation.
- Runoff from fire control may cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 300 meters (1000 feet).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

**CAUTION:** All these products have a very low flash point: Use of water spray when fighting fire may be inefficient.

**Small Fires**

- Dry chemical, CO<sub>2</sub>, water spray or alcohol-resistant foam.

**Large Fires**

- Water spray, fog or alcohol-resistant foam.
- Use water spray or fog; do not use straight streams.
- Move containers from fire area if you can do it without risk.

**Fire involving Tanks or Car/Trailer Loads**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**SPILL OR LEAK**

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Prevent entry into waterways, sewers, basements or confined areas.
- A vapor suppressing foam may be used to reduce vapors.
- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
- Use clean non-sparking tools to collect absorbed material.

**Large Spills**

- Dike far ahead of liquid spill for later disposal.
- Water spray may reduce vapor; but may not prevent ignition in closed spaces.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Wash skin with soap and water.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- **HIGHLY FLAMMABLE:** Will be easily ignited by heat, sparks or flames.
- Vapors may form explosive mixtures with air.
- Vapors may travel to source of ignition and flash back.
- Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Vapor explosion hazard indoors, outdoors or in sewers.
- Those substances designated with a "P" may polymerize explosively when heated or involved in a fire.
- Runoff to sewer may create fire or explosion hazard.
- Containers may explode when heated.
- Many liquids are lighter than water.
- Substance may be transported hot.

**HEALTH**

- Inhalation or contact with material may irritate or burn skin and eyes.
- Fire may produce irritating, corrosive and/or toxic gases.
- Vapors may cause dizziness or suffocation.
- Runoff from fire control or dilution water may cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 300 meters (1000 feet).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

**CAUTION:** All these products have a very low flash point: Use of water spray when fighting fire may be inefficient.

**Small Fires**

- Dry chemical, CO<sub>2</sub>, water spray or regular foam.

**Large Fires**

- Water spray, fog or regular foam.
- Use water spray or fog; do not use straight streams.
- Move containers from fire area if you can do it without risk.

**Fire involving Tanks or Car/Trailer Loads**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**SPILL OR LEAK**

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Prevent entry into waterways, sewers, basements or confined areas.
- A vapor suppressing foam may be used to reduce vapors.
- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
- Use clean non-sparking tools to collect absorbed material.

**Large Spills**

- Dike far ahead of liquid spill for later disposal.
- Water spray may reduce vapor; but may not prevent ignition in closed spaces.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Wash skin with soap and water.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- **HIGHLY FLAMMABLE:** Will be easily ignited by heat, sparks or flames.
- Vapors may form explosive mixtures with air.
- Vapors may travel to source of ignition and flash back.
- Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Vapor explosion hazard indoors, outdoors or in sewers.
- Those substances designated with a "P" may polymerize explosively when heated or involved in a fire.
- Runoff to sewer may create fire or explosion hazard.
- Containers may explode when heated.
- Many liquids are lighter than water.

**HEALTH**

- May cause toxic effects if inhaled or absorbed through skin.
- Inhalation or contact with material may irritate or burn skin and eyes.
- Fire will produce irritating, corrosive and/or toxic gases.
- Vapors may cause dizziness or suffocation.
- Runoff from fire control or dilution water may cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 50 to 100 meters (160 to 330 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 300 meters (1000 feet).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.



**EMERGENCY RESPONSE****FIRE**

**CAUTION:** All these products have a very low flash point: Use of water spray when fighting fire may be inefficient.

**Small Fires** • Dry chemical, CO<sub>2</sub>, water spray or alcohol-resistant foam.

- Do not use dry chemical extinguishers to control fires involving nitromethane or nitroethane.

**Large Fires**

- Water spray, fog or alcohol-resistant foam.
- Do not use straight streams.
- Move containers from fire area if you can do it without risk.

**Fire involving Tanks or Car/Trailer Loads**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**SPILL OR LEAK**

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Prevent entry into waterways, sewers, basements or confined areas.
- A vapor suppressing foam may be used to reduce vapors.
- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
- Use clean non-sparking tools to collect absorbed material.

**Large Spills** • Dike far ahead of liquid spill for later disposal.

- Water spray may reduce vapor; but may not prevent ignition in closed spaces.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Wash skin with soap and water.
- Keep victim warm and quiet.
- Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- **HIGHLY FLAMMABLE:** Will be easily ignited by heat, sparks or flames.
- Vapors may form explosive mixtures with air.
- Vapors may travel to source of ignition and flash back.
- Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Vapor explosion hazard indoors, outdoors or in sewers.
- Those substances designated with a "P" may polymerize explosively when heated or involved in a fire.
- Runoff to sewer may create fire or explosion hazard.
- Containers may explode when heated.
- Many liquids are lighter than water.

**HEALTH**

- May cause toxic effects if inhaled or absorbed through skin.
- Inhalation or contact with material may irritate or burn skin and eyes.
- Fire will produce irritating, corrosive and/or toxic gases.
- Vapors may cause dizziness or suffocation.
- Runoff from fire control or dilution water may cause pollution.

**PUBLIC SAFETY**

- **CALL** Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
- Isolate spill or leak area immediately for at least 50 to 100 meters (160 to 330 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 300 meters (1000 feet).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

**CAUTION:** All these products have a very low flash point: Use of water spray when fighting fire may be inefficient.

**Small Fires**

- Dry chemical, CO<sub>2</sub>, water spray or regular foam.

**Large Fires**

- Water spray, fog or regular foam.
- **Do not use straight streams.**
- Move containers from fire area if you can do it without risk.

**Fire involving Tanks or Car/Trailer Loads**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**SPILL OR LEAK**

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Prevent entry into waterways, sewers, basements or confined areas.
- A vapor suppressing foam may be used to reduce vapors.
- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
- Use clean non-sparking tools to collect absorbed material.

**Large Spills** • Dike far ahead of liquid spill for later disposal.

- Water spray may reduce vapor; but may not prevent ignition in closed spaces.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Wash skin with soap and water.
- Keep victim warm and quiet.
- Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****HEALTH**

- **TOXIC; may be fatal if inhaled, ingested or absorbed through skin.**
- Inhalation or contact with some of these materials will irritate or burn skin and eyes.
- Fire will produce irritating, corrosive and/or toxic gases.
- Vapors may cause dizziness or suffocation.
- Runoff from fire control or dilution water may cause pollution.

**FIRE OR EXPLOSION**

- **HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.**
- Vapors may form explosive mixtures with air.
- Vapors may travel to source of ignition and flash back.
- Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Vapor explosion and poison hazard indoors, outdoors or in sewers.
- Those substances designated with a "P" may polymerize explosively when heated or involved in a fire.
- Runoff to sewer may create fire or explosion hazard.
- Containers may explode when heated.
- Many liquids are lighter than water.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 100 to 200 meters (330 to 660 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

**EVACUATION****Spill**

- See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

**CAUTION:** All these products have a very low flash point: Use of water spray when fighting fire may be inefficient.

**Small Fires** • Dry chemical, CO<sub>2</sub>, water spray or alcohol-resistant foam.

**Large Fires**

- Water spray, fog or alcohol-resistant foam.
- Move containers from fire area if you can do it without risk.
- Dike fire control water for later disposal; do not scatter the material.
- Use water spray or fog; do not use straight streams.

**Fire involving Tanks or Car/Trailer Loads**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**SPILL OR LEAK**

- Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire.
- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Prevent entry into waterways, sewers, basements or confined areas.
- A vapor suppressing foam may be used to reduce vapors.

**Small Spills** • Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

- Use clean non-sparking tools to collect absorbed material.

**Large Spills** • Dike far ahead of liquid spill for later disposal.

- Water spray may reduce vapor; but may not prevent ignition in closed spaces.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- **Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.**
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Wash skin with soap and water.
- Keep victim warm and quiet.
- Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- Flammable/combustible materials.
- May be ignited by heat, sparks or flames.
- Vapors may form explosive mixtures with air.
- Vapors may travel to source of ignition and flash back.
- Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Vapor explosion hazard indoors, outdoors or in sewers.
- Those substances designated with a "P" may polymerize explosively when heated or involved in a fire.
- Runoff to sewer may create fire or explosion hazard.
- Containers may explode when heated.
- Many liquids are lighter than water.

**HEALTH**

- May cause toxic effects if inhaled or ingested/swallowed.
- Contact with substance may cause severe burns to skin and eyes.
- Fire will produce irritating, corrosive and/or toxic gases.
- Vapors may cause dizziness or suffocation.
- Runoff from fire control or dilution water may cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 50 to 100 meters (160 to 330 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

**EVACUATION****Large Spill**

- See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

- **Some of these materials may react violently with water.**

**Small Fires** • Dry chemical, CO<sub>2</sub>, water spray or alcohol-resistant foam.

**Large Fires**

- Water spray, fog or alcohol-resistant foam.
- Move containers from fire area if you can do it without risk.
- Dike fire control water for later disposal; do not scatter the material.
- Do not get water inside containers.

**Fire involving Tanks or Car/Trailer Loads**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**SPILL OR LEAK**

- Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire.
  - ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
  - All equipment used when handling the product must be grounded.
  - Do not touch or walk through spilled material.
  - Stop leak if you can do it without risk.
  - Prevent entry into waterways, sewers, basements or confined areas.
  - A vapor suppressing foam may be used to reduce vapors.
  - Absorb with earth, sand or other non-combustible material and transfer to containers (except for Hydrazine).
  - Use clean non-sparking tools to collect absorbed material.
- Large Spills** • Dike far ahead of liquid spill for later disposal.
- Water spray may reduce vapor; but may not prevent ignition in closed spaces.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- **Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.**
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Keep victim warm and quiet.
- Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## **POTENTIAL HAZARDS**

### **FIRE OR EXPLOSION**

- Flammable/combustible material.
- May be ignited by friction, heat, sparks or flames.
- Some may burn rapidly with flare burning effect.
- Powders, dusts, shavings, borings, turnings or cuttings may explode or burn with explosive violence.
- Substance may be transported in a molten form.
- May re-ignite after fire is extinguished.

### **HEALTH**

- Fire may produce irritating and/or toxic gases.
- Contact may cause burns to skin and eyes.
- Contact with molten substance may cause severe burns to skin and eyes.
- Runoff from fire control may cause pollution.

## **PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 10 to 25 meters (30 to 80 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.

### **PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

### **EVACUATION**

#### **Large Spill**

- Consider initial downwind evacuation for at least 100 meters (330 feet).

#### **Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.



**EMERGENCY RESPONSE****FIRE****Small Fires**

- Dry chemical, CO<sub>2</sub>, sand, earth, water spray or regular foam.

**Large Fires**

- Water spray, fog or regular foam.
- Move containers from fire area if you can do it without risk.

**Fire involving Tanks or Car/Trailer Loads**

- Cool containers with flooding quantities of water until well after fire is out.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Do not touch or walk through spilled material.

**Small Dry Spills**

- With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.

**Large Spills**

- Wet down with water and dike for later disposal.
- Prevent entry into waterways, sewers, basements or confined areas.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Removal of solidified molten material from skin requires medical assistance.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- Flammable/combustible material.
- May be ignited by heat, sparks or flames.
- When heated, vapors may form explosive mixtures with air: indoors, outdoors, and sewers explosion hazards.
- Contact with metals may evolve flammable hydrogen gas.
- Containers may explode when heated.

**HEALTH**

- TOXIC; inhalation, ingestion, or skin contact with material may cause severe injury or death.
- Fire will produce irritating, corrosive and/or toxic gases.
- Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Stay upwind.
- Keep unauthorized personnel away.
- Keep out of low areas.
- Ventilate enclosed areas.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 100 meters (330 feet).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE****Small Fires**

- Dry chemical, CO<sub>2</sub>, water spray or alcohol-resistant foam.

**Large Fires**

- Water spray, fog or alcohol-resistant foam.
- Move containers from fire area if you can do it without risk.
- Use water spray or fog; do not use straight streams.
- Do not get water inside containers.
- Dike fire control water for later disposal; do not scatter the material.

**Fire involving Tanks or Car/Trailer Loads**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire.
- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Stop leak if you can do it without risk.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Prevent entry into waterways, sewers, basements or confined areas.
- Use clean non-sparking tools to collect material and place it into loosely covered plastic containers for later disposal.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- **Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.**
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- For minor skin contact, avoid spreading material on unaffected skin.
- Keep victim warm and quiet.
- Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- Flammable/combustible material.
- May ignite on contact with moist air or moisture.
- May burn rapidly with flare-burning effect.
- Some react vigorously or explosively on contact with water.
- Some may decompose explosively when heated or involved in a fire.
- May re-ignite after fire is extinguished.
- Runoff may create fire or explosion hazard.

**HEALTH**

- Fire will produce irritating, corrosive and/or toxic gases.
- Inhalation of decomposition products may cause severe injury or death.
- Contact with substance may cause severe burns to skin and eyes.
- Runoff from fire control may cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 100 to 150 meters (330 to 490 feet) in all directions.
- Stay upwind.
- Keep unauthorized personnel away.
- Keep out of low areas.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing will only provide limited protection.

**EVACUATION****Spill**

- See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

- DO NOT USE WATER, CO<sub>2</sub> OR FOAM ON MATERIAL ITSELF.

- Some of these materials may react violently with water.

**EXCEPTION:** For Dithionite (Hydrosulfite/Hydrosulphite) UN1384, UN1923 and UN1929, USE FLOODING AMOUNTS OF WATER for SMALL AND LARGE fires to stop the reaction. Smothering will not work for these materials. They do not need air to burn.

**Small Fires**

- Dry chemical, soda ash, lime or DRY sand, EXCEPT for UN1384, UN1923 and UN1929.

**Large Fires**

- DRY sand, dry chemical, soda ash or lime, EXCEPT for UN1384, UN1923 and UN1929, or withdraw from area and let fire burn.
- Move containers from fire area if you can do it without risk.

**Fire involving Tanks or Car/Trailer Loads**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Do not get water inside containers or in contact with substance.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- Fully encapsulating, vapor protective clothing should be worn for spills and leak with no fire.
- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.

**Small Spills**

**EXCEPTION:** For Dithionite (Hydrosulfite/Hydrosulphite) spills, UN1384, UN1923 and UN1929, dissolve with 5 parts water and collect for proper disposal.

- Cover with DRY earth, DRY sand, or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.
- Use clean non-sparking tools to collect material and place it into loosely covered plastic containers for later disposal.
- Prevent entry into waterways, sewers, basements or confined areas.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- Extremely flammable; will ignite itself if exposed to air.
- Burns rapidly, releasing dense, white, irritating fumes.
- Substance may be transported in a molten form.
- May re-ignite after fire is extinguished.

**HEALTH**

- Fire will produce irritating, corrosive and/or toxic gases.
- TOXIC; ingestion of substance or inhalation of decomposition products will cause severe injury or death.
- Contact with substance may cause severe burns to skin and eyes.
- Some effects may be experienced due to skin absorption.
- Runoff from fire control may be corrosive and/or toxic and cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 100 to 150 meters (330 to 490 feet) in all directions.
- Stay upwind.
- Keep unauthorized personnel away.
- Keep out of low areas.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

**EVACUATION****Spill**

- Consider initial downwind evacuation for at least 300 meters (1000 feet).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE****Small Fires**

- Water spray, wet sand or wet earth.

**Large Fires**

- Water spray or fog.
- **Do not scatter spilled material with high pressure water streams.**
- Move containers from fire area if you can do it without risk.

**Fire involving Tanks or Car/Trailer Loads**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire.
- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Do not touch or walk through spilled material.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Stop leak if you can do it without risk.

**Small Spills**

- Cover with water, sand or earth. Shovel into metal container and keep material under water.

**Large Spills**

- Dike for later disposal and cover with wet sand or earth.
- Prevent entry into waterways, sewers, basements or confined areas.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- In case of contact with substance, keep exposed skin areas immersed in water or covered with wet bandages until medical attention is received.
- Removal of solidified molten material from skin requires medical assistance.
- Remove and isolate contaminated clothing and shoes at the site and place in metal container filled with water. Fire hazard if allowed to dry.
- Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****HEALTH**

- TOXIC; inhalation, ingestion or contact (skin, eyes) with vapors, dusts or substance may cause severe injury, burns, or death.
- Fire will produce irritating, corrosive and/or toxic gases.
- Reaction with water may generate much heat which will increase the concentration of fumes in the air.
- Contact with molten substance may cause severe burns to skin and eyes.
- Runoff from fire control or dilution water may cause pollution.

**FIRE OR EXPLOSION**

- Some of these materials may burn, but none ignite readily.
- May ignite combustibles (wood, paper, oil, clothing, etc.).
- Substance will react with water (some violently), releasing corrosive and/or toxic gases.
- Flammable/toxic gases may accumulate in confined areas (basement, tanks, hopper/tank cars etc.)
- Contact with metals may evolve flammable hydrogen gas.
- Containers may explode when heated or if contaminated with water.
- Substance may be transported in a molten form.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 50 to 100 meters (160 to 330 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate enclosed areas.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

**EVACUATION****Spill**

- See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.



**EMERGENCY RESPONSE****FIRE**

- When material is not involved in fire: do not use water on material itself.

**Small Fires**

- Dry chemical or CO<sub>2</sub>.
- Move containers from fire area if you can do it without risk.

**Large Fires**

- Flood fire area with large quantities of water, while knocking down vapors with water fog. If insufficient water supply: knock down vapors only.

**Fire Involving Tanks or Car/Trailer Loads**

- Cool containers with flooding quantities of water until well after fire is out.
- Do not get water inside containers.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Stop leak if you can do it without risk.
- Use water spray to reduce vapors; do not put water directly on leak, spill area or inside container.
- Keep combustibles (wood, paper, oil, etc.) away from spilled material.

**Small Spills** • Cover with DRY earth, DRY sand, or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.

- Use clean non-sparking tools to collect material and place it into loosely covered plastic containers for later disposal.
- Prevent entry into waterways, sewers, basements or confined areas.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- **Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.**
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- For minor skin contact, avoid spreading material on unaffected skin.
- Removal of solidified molten material from skin requires medical assistance.
- Keep victim warm and quiet.
- Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- Produce flammable gases on contact with water.
- May ignite on contact with water or moist air.
- Some react vigorously or explosively on contact with water.
- May be ignited by heat, sparks or flames.
- May re-ignite after fire is extinguished.
- Some are transported in highly flammable liquids.
- Runoff may create fire or explosion hazard.

**HEALTH**

- Inhalation or contact with vapors, substance, or decomposition products may cause severe injury or death.
- May produce corrosive solutions on contact with water.
- Fire will produce irritating, corrosive and/or toxic gases.
- Runoff from fire control may cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 50 to 100 meters (160 to 330 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate the area before entry.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 250 meters (800 feet).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

- **DO NOT USE WATER OR FOAM.**

**Small Fires**

- Dry chemical, soda ash, lime or sand.

**Large Fires**

- DRY sand, dry chemical, soda ash or lime or withdraw from area and let fire burn.
- Move containers from fire area if you can do it without risk.

**Magnesium Fires**

- DRY sand, sodium chloride powder, graphite powder or Met-L-X® powder.

**Lithium Fires**

- DRY sand, sodium chloride powder, graphite powder, copper powder or Lith-X® powder.

**Fire involving Tanks or Car/Trailer Loads**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Do not get water inside containers.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- **DO NOT GET WATER on spilled substance or inside containers.**

**Small Spills** • Cover with DRY earth, DRY sand, or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.

- Dike for later disposal; do not apply water unless directed to do so.

**Powder Spills** • Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry.

- **DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST.**

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, wipe from skin immediately; flush skin or eyes with running water for at least 20 minutes.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- Produce flammable and toxic gases on contact with water.
- May ignite on contact with water or moist air.
- Some react vigorously or explosively on contact with water.
- May be ignited by heat, sparks or flames.
- May re-ignite after fire is extinguished.
- Some are transported in highly flammable liquids.
- Runoff may create fire or explosion hazard.

**HEALTH**

- Highly toxic: contact with water produces toxic gas, may be fatal if inhaled.
- Inhalation or contact with vapors, substance, or decomposition products may cause severe injury or death.
- May produce corrosive solutions on contact with water.
- Fire will produce irritating, corrosive and/or toxic gases.
- Runoff from fire control may cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 100 to 150 meters (330 to 490 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate the area before entry.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

**EVACUATION****Large Spill**

- See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

- **DO NOT USE WATER OR FOAM. (FOAM MAY BE USED FOR CHLOROSILANES, SEE BELOW)**

**Small Fires**

- Dry chemical, soda ash, lime or sand.

**Large Fires**

- DRY sand, dry chemical, soda ash or lime or withdraw from area and let fire burn.
- **FOR CHLOROSILANES, DO NOT USE WATER; use AFFF alcohol-resistant medium expansion foam; DO NOT USE dry chemicals, soda ash or lime on chlorosilane fires (large or small) as they may release large quantities of hydrogen gas which may explode.**
- Move containers from fire area if you can do it without risk.

**Fire involving Tanks or Car/Trailer Loads**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Do not get water inside containers.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- **ALWAYS** stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire.
- **ELIMINATE** all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- **DO NOT GET WATER on spilled substance or inside containers.**
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- **FOR CHLOROSILANES, use AFFF alcohol-resistant medium expansion foam to reduce vapors.**

**Small Spills** • Cover with DRY earth, DRY sand, or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.

- Dike for later disposal; do not apply water unless directed to do so.

**Powder Spills** • Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry.

- **DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST.**

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- **Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.**
- Administer oxygen if breathing is difficult. • Remove and isolate contaminated clothing and shoes. • In case of contact with substance, wipe from skin immediately; flush skin or eyes with running water for at least 20 minutes.
- Keep victim warm and quiet. • Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- These substances will accelerate burning when involved in a fire.
- Some may decompose explosively when heated or involved in a fire.
- May explode from heat or contamination.
- Some will react explosively with hydrocarbons (fuels).
- May ignite combustibles (wood, paper, oil, clothing, etc.).
- Containers may explode when heated.
- Runoff may create fire or explosion hazard.

**HEALTH**

- Inhalation, ingestion or contact (skin, eyes) with vapors or substance may cause severe injury, burns, or death.
- Fire may produce irritating, corrosive and/or toxic gases.
- Runoff from fire control or dilution water may cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 10 to 25 meters (30 to 80 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 100 meters (330 feet).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE****Small Fires**

- Use water. Do not use dry chemicals or foams. CO<sub>2</sub> or Halon® may provide limited control.

**Large Fires**

- Flood fire area with water from a distance.
- Move containers from fire area if you can do it without risk.
- Do not move cargo or vehicle if cargo has been exposed to heat.
- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**SPILL OR LEAK**

- Keep combustibles (wood, paper, oil, etc.) away from spilled material.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Stop leak if you can do it without risk.
- Do not get water inside containers.

**Small Dry Spills**

- With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.

**Small Liquid Spills**

- Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

**Large Spills**

- Dike far ahead of liquid spill for later disposal.
- **Following product recovery, flush area with water.**

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- These substances will accelerate burning when involved in a fire.
- May explode from heat or contamination.
- Some may burn rapidly.
- Some will react explosively with hydrocarbons (fuels).
- May ignite combustibles (wood, paper, oil, clothing, etc.).
- Containers may explode when heated.
- Runoff may create fire or explosion hazard.

**HEALTH**

- Toxic by ingestion.
- Inhalation of dust is toxic.
- Fire may produce irritating, corrosive and/or toxic gases.
- Contact with substance may cause severe burns to skin and eyes.
- Runoff from fire control or dilution water may cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 10 to 25 meters (30 to 80 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing will only provide limited protection.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 100 meters (330 feet).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.



**EMERGENCY RESPONSE****FIRE****Small Fires**

- Use water. Do not use dry chemicals or foams. CO<sub>2</sub> or Halon® may provide limited control.

**Large Fires**

- Flood fire area with water from a distance.
- Move containers from fire area if you can do it without risk.
- Do not move cargo or vehicle if cargo has been exposed to heat.
- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**SPILL OR LEAK**

- Keep combustibles (wood, paper, oil, etc.) away from spilled material.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Stop leak if you can do it without risk.

**Small Dry Spills**

- With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.

**Large Spills**

- Dike far ahead of spill for later disposal.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- These substances will accelerate burning when involved in a fire.
- May explode from heat or contamination.
- Some will react explosively with hydrocarbons (fuels).
- May ignite combustibles (wood, paper, oil, clothing, etc.).
- Containers may explode when heated.
- Runoff may create fire or explosion hazard.

**HEALTH**

- TOXIC; inhalation, ingestion or contact (skin, eyes) with vapors or substance may cause severe injury, burns or death.
- Fire may produce irritating, corrosive and/or toxic gases.
- Toxic/flammable fumes may accumulate in confined areas (basement, tanks, hopper/tank cars, etc.).
- Runoff from fire control or dilution water may cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 50 to 100 meters (160 to 330 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

**EVACUATION****Spill**

- See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE****Small Fires**

- Use water. Do not use dry chemicals or foams. CO<sub>2</sub> or Halon® may provide limited control.

**Large Fires**

- Flood fire area with water from a distance.
- Move containers from fire area if you can do it without risk.
- Do not move cargo or vehicle if cargo has been exposed to heat.
- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**SPILL OR LEAK**

- Keep combustibles (wood, paper, oil, etc.) away from spilled material.
- Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Stop leak if you can do it without risk.
- Use water spray to reduce vapors or divert vapor cloud drift.
- Do not get water inside containers.

**Small Liquid Spills**

- Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

**Large Spills**

- Dike far ahead of liquid spill for later disposal.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- **Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.**
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- May explode from friction, heat or contamination.
- These substances will accelerate burning when involved in a fire.
- May ignite combustibles (wood, paper, oil, clothing, etc.).
- Some will react explosively with hydrocarbons (fuels).
- Containers may explode when heated.
- Runoff may create fire or explosion hazard.

**HEALTH**

- **TOXIC**; inhalation, ingestion or contact (skin, eyes) with vapors, dusts or substance may cause severe injury, burns, or death.
- Fire may produce irritating and/or toxic gases.
- Toxic fumes or dust may accumulate in confined areas (basement, tanks, hopper/tank cars, etc.).
- Runoff from fire control or dilution water may cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 50 to 100 meters (160 to 330 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations **ONLY**; it is not effective in spill situations.

**EVACUATION****Spill**

- See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

**Fire**

- If tank, rail car or tank truck is involved in a fire, **ISOLATE** for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE****Small Fires**

- Use water. Do not use dry chemicals or foams. CO<sub>2</sub> or Halon® may provide limited control.

**Large Fires**

- Flood fire area with water from a distance.
- Do not move cargo or vehicle if cargo has been exposed to heat.
- Move containers from fire area if you can do it without risk.
- Do not get water inside containers: a violent reaction may occur.
- Cool containers with flooding quantities of water until well after fire is out.
- Dike fire-control water for later disposal.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**SPILL OR LEAK**

- Keep combustibles (wood, paper, oil, etc.) away from spilled material.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Use water spray to reduce vapors or divert vapor cloud drift.
- Prevent entry into waterways, sewers, basements or confined areas.

**Small Spills**

- Flush area with flooding quantities of water.

**Large Spills**

- **DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST.**

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- May ignite combustibles (wood, paper, oil, clothing, etc.).
- React vigorously and/or explosively with water.
- Produce toxic and/or corrosive substances on contact with water.
- Flammable/toxic gases may accumulate in tanks and hopper cars.
- Containers may explode when heated.
- Runoff may create fire or explosion hazard.

**HEALTH**

- TOXIC; inhalation or contact with vapor, substance, or decomposition products may cause severe injury or death.
- Fire will produce irritating, corrosive and/or toxic gases.
- Runoff from fire control or dilution water may cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 50 to 100 meters (160 to 330 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

**EVACUATION****Spill**

- See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

- **DO NOT USE WATER OR FOAM.**

**Small Fires**

- Dry chemical, soda ash or lime.

**Large Fires**

- DRY sand, dry chemical, soda ash or lime or withdraw from area and let fire burn.
- Move containers from fire area if you can do it without risk.

**Fire involving Tanks or Car/Trailer Loads**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- **ALWAYS** stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- **ELIMINATE** all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Stop leak if you can do it without risk.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- **DO NOT GET WATER on spilled substance or inside containers.**

**Small Spills**

- Cover with DRY earth, DRY sand, or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.

**Large Spills**

- **DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST.**

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- **Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.**
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Keep victim warm and quiet. • Keep victim under observation.
- Effects of contact or inhalation may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- May explode from heat or contamination.
- May ignite combustibles (wood, paper, oil, clothing, etc.).
- May be ignited by heat, sparks or flames.
- May burn rapidly with flare-burning effect.
- Containers may explode when heated.
- Runoff may create fire or explosion hazard.

**HEALTH**

- Fire may produce irritating, corrosive and/or toxic gases.
- Ingestion or contact (skin, eyes) with substance may cause severe injury or burns.
- Runoff from fire control or dilution water may cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing will only provide limited protection.

**EVACUATION****Large Spill**

- Consider initial evacuation for at least 250 meters (800 feet).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.



**EMERGENCY RESPONSE****FIRE****Small Fires**

- Water spray or fog is preferred; if water not available use dry chemical, CO<sub>2</sub> or regular foam.

**Large Fires**

- Flood fire area with water from a distance.
- Use water spray or fog; do not use straight streams.
- Move containers from fire area if you can do it without risk.
- Do not move cargo or vehicle if cargo has been exposed to heat.
- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**SPILL OR LEAK**

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Keep combustibles (wood, paper, oil, etc.) away from spilled material.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Keep substance wet using water spray.
- Stop leak if you can do it without risk.

**Small Spills**

- Take up with inert, damp, noncombustible material using clean non-sparking tools and place into loosely covered plastic containers for later disposal.

**Large Spills**

- Wet down with water and dike for later disposal.
- Prevent entry into waterways, sewers, basements or confined areas.
- **DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST.**

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- Remove material from skin immediately.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- May explode from heat, shock, friction or contamination.
- May ignite combustibles (wood, paper, oil, clothing, etc.).
- May be ignited by heat, sparks or flames.
- May burn rapidly with flare-burning effect.
- Containers may explode when heated.
- Runoff may create fire or explosion hazard.

**HEALTH**

- Fire may produce irritating, corrosive and/or toxic gases.
- Ingestion or contact (skin, eyes) with substance may cause severe injury or burns.
- Runoff from fire control or dilution water may cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing will only provide limited protection.

**EVACUATION****Large Spill**

- Consider initial evacuation for at least 250 meters (800 feet).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE****Small Fires**

- Water spray or fog is preferred; if water not available use dry chemical, CO<sub>2</sub> or regular foam.

**Large Fires**

- Flood fire area with water from a distance.
- Use water spray or fog; do not use straight streams.
- Move containers from fire area if you can do it without risk.
- Do not move cargo or vehicle if cargo has been exposed to heat.
- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**SPILL OR LEAK**

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Keep combustibles (wood, paper, oil, etc.) away from spilled material.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Keep substance wet using water spray.
- Stop leak if you can do it without risk.

**Small Spills**

- Take up with inert, damp, noncombustible material using clean non-sparking tools and place into loosely covered plastic containers for later disposal.

**Large Spills**

- Wet down with water and dike for later disposal.
- Prevent entry into waterways, sewers, basements or confined areas.
- **DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST.**

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- Remove material from skin immediately.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- May explode from heat or contamination.
- May ignite combustibles (wood, paper, oil, clothing, etc.).
- May be ignited by heat, sparks or flames.
- May burn rapidly with flare-burning effect.
- Containers may explode when heated.
- Runoff may create fire or explosion hazard.

**HEALTH**

- TOXIC; inhalation, ingestion or contact (skin, eyes) with vapors, dusts or substance may cause severe injury, burns, or death.
- Contact of vapor or substance with eyes may cause blindness within minutes.
- Fire may produce irritating, corrosive and/or toxic gases.
- Toxic fumes or dust may accumulate in confined areas (basement, tanks, hopper/tank cars, etc.).
- Runoff from fire control or dilution water may cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

**EVACUATION****Large Spill**

- Consider initial evacuation for at least 250 meters (800 feet).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE****Small Fires**

- Water spray or fog is preferred; if water not available use dry chemical, CO<sub>2</sub> or regular foam.

**Large Fires**

- Flood fire area with water from a distance.
- Use water spray or fog; do not use straight streams.
- Move containers from fire area if you can do it without risk.
- Do not move cargo or vehicle if cargo has been exposed to heat.
- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**SPILL OR LEAK**

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Keep combustibles (wood, paper, oil, etc.) away from spilled material.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Keep substance wet using water spray.
- Stop leak if you can do it without risk.

**Small Spills**

- Take up with inert, damp, noncombustible material using clean non-sparking tools and place into loosely covered plastic containers for later disposal.

**Large Spills**

- Wet down with water and dike for later disposal.
- Prevent entry into waterways, sewers, basements or confined areas.
- **DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST.**

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- Remove material from skin immediately.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- May explode from heat, contamination or loss of temperature control.
- These materials are particularly sensitive to temperature rises. Above a given "Control Temperature" they decompose violently and catch fire.
- May ignite combustibles (wood, paper, oil, clothing, etc.).
- May ignite spontaneously if exposed to air.
- May be ignited by heat, sparks or flames.
- May burn rapidly with flare-burning effect.
- Containers may explode when heated.
- Runoff may create fire or explosion hazard.

**HEALTH**

- Fire may produce irritating, corrosive and/or toxic gases.
- Ingestion or contact (skin, eyes) with substance may cause severe injury or burns.
- Runoff from fire control or dilution water may cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 50 to 100 meters (160 to 330 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- **DO NOT allow the substance to warm up. Obtain liquid nitrogen, dry ice or ice for cooling. If none can be obtained, evacuate the area immediately.**

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing will only provide limited protection.

**EVACUATION****Large Spill**

- Consider initial evacuation for at least 250 meters (800 feet).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

- The temperature of the substance must be maintained at or below the "Control Temperature" at all times.

**Small Fires**

- Water spray or fog is preferred; if water not available use dry chemical, CO<sub>2</sub> or regular foam.

**Large Fires**

- Flood fire area with water from a distance.
- Use water spray or fog; do not use straight streams.
- Move containers from fire area if you can do it without risk.
- Do not move cargo or vehicle if cargo has been exposed to heat.
- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- **BEWARE OF POSSIBLE CONTAINER EXPLOSION.**
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**SPILL OR LEAK**

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Keep combustibles (wood, paper, oil, etc.) away from spilled material.
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.

**Small Spills**

- Take up with inert, damp, noncombustible material using clean non-sparking tools and place into loosely covered plastic containers for later disposal.

**Large Spills**

- Dike far ahead of liquid spill for later disposal.
- Prevent entry into waterways, sewers, basements or confined areas.
- **DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST.**

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- Remove material from skin immediately.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- Self-decomposition or self-ignition may be triggered by heat, chemical reaction, friction or impact.
- May be ignited by heat, sparks or flames.
- Some may decompose explosively when heated or involved in a fire.
- May burn violently. Decomposition may be self-accelerating and produce large amounts of gases.
- Vapors or dust may form explosive mixtures with air.

**HEALTH**

- Inhalation or contact with vapors, substance, or decomposition products may cause severe injury or death.
- May produce irritating, toxic and/or corrosive gases.
- Runoff from fire control may cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing will only provide limited protection.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 250 meters (800 feet).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.



**EMERGENCY RESPONSE****FIRE****Small Fires**

- Dry chemical, CO<sub>2</sub>, water spray or regular foam.

**Large Fires**

- Flood fire area with water from a distance.
- Move containers from fire area if you can do it without risk.

**Fire Involving Tanks or Car/Trailer Loads**

- **BEWARE OF POSSIBLE CONTAINER EXPLOSION.**
- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

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**SPILL OR LEAK**

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.

**Small Spills**

- Take up with inert, damp, noncombustible material using clean non-sparking tools and place into loosely covered plastic containers for later disposal.
- Prevent entry into waterways, sewers, basements or confined areas.

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**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- Self-decomposition or self-ignition may be triggered by heat, chemical reaction, friction or impact.
- Self-accelerating decomposition may occur if the specific control temperature is not maintained.
- These materials are particularly sensitive to temperature rises. Above a given "Control Temperature" they decompose violently and catch fire.
- May be ignited by heat, sparks or flames.
- Some may decompose explosively when heated or involved in a fire.
- May burn violently. Decomposition may be self-accelerating and produce large amounts of gases.
- Vapors or dust may form explosive mixtures with air.

**HEALTH**

- Inhalation or contact with vapors, substance, or decomposition products may cause severe injury or death.
- May produce irritating, toxic and/or corrosive gases.
- Runoff from fire control may cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 50 to 100 meters (160 to 330 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- **DO NOT allow the substance to warm up. Obtain liquid nitrogen, dry ice or ice for cooling. If none can be obtained, evacuate the area immediately.**

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing will only provide limited protection.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 250 meters (800 feet).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

- The temperature of the substance must be maintained at or below the "Control Temperature" at all times.

**Small Fires**

- Dry chemical, CO<sub>2</sub>, water spray or regular foam.

**Large Fires**

- Flood fire area with water from a distance.
- Move containers from fire area if you can do it without risk.

**Fire involving Tanks or Car/Trailer Loads**

- **BEWARE OF POSSIBLE CONTAINER EXPLOSION.**
- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.

**Small Spills**

- Take up with inert, damp, noncombustible material using clean non-sparking tools and place into loosely covered plastic containers for later disposal.
- Prevent entry into waterways, sewers, basements or confined areas.
- **DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST.**

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****HEALTH**

- Highly toxic, may be fatal if inhaled, swallowed or absorbed through skin.
- Avoid any skin contact.
- Effects of contact or inhalation may be delayed.
- Fire may produce irritating, corrosive and/or toxic gases.
- Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution.

**FIRE OR EXPLOSION**

- Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.
- Containers may explode when heated.
- Runoff may pollute waterways.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

**EVACUATION****Spill**

- See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE****Small Fires**

- Dry chemical, CO<sub>2</sub> or water spray.

**Large Fires**

- Water spray, fog or regular foam.
- Move containers from fire area if you can do it without risk.
- Dike fire control water for later disposal; do not scatter the material.
- Use water spray or fog; do not use straight streams.

**Fire involving Tanks or Car/Trailer Loads**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Do not get water inside containers.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**SPILL OR LEAK**

- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Stop leak if you can do it without risk.
- Prevent entry into waterways, sewers, basements or confined areas.
- Cover with plastic sheet to prevent spreading.
- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
- DO NOT GET WATER INSIDE CONTAINERS.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- **Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.**
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- For minor skin contact, avoid spreading material on unaffected skin.
- Keep victim warm and quiet.
- Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****HEALTH**

- Highly toxic, may be fatal if inhaled, swallowed or absorbed through skin.
- Contact with molten substance may cause severe burns to skin and eyes.
- Avoid any skin contact.
- Effects of contact or inhalation may be delayed.
- Fire may produce irritating, corrosive and/or toxic gases.
- Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution.

**FIRE OR EXPLOSION**

- Combustible material: may burn but does not ignite readily.
- Containers may explode when heated.
- Runoff may pollute waterways.
- Substance may be transported in a molten form.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

**EVACUATION****Spill**

- See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE****Small Fires**

- Dry chemical, CO<sub>2</sub> or water spray.

**Large Fires**

- Water spray, fog or regular foam.
- Move containers from fire area if you can do it without risk.
- Dike fire control water for later disposal; do not scatter the material.
- Use water spray or fog; do not use straight streams.

**Fire involving Tanks or Car/Trailer Loads**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Do not get water inside containers.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**SPILL OR LEAK**

- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Stop leak if you can do it without risk.
- Prevent entry into waterways, sewers, basements or confined areas.
- Cover with plastic sheet to prevent spreading.
- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
- DO NOT GET WATER INSIDE CONTAINERS.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- **Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.**
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- For minor skin contact, avoid spreading material on unaffected skin.
- Keep victim warm and quiet.
- Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****HEALTH**

- **TOXIC**; inhalation, ingestion, or skin contact with material may cause severe injury or death.
- Contact with molten substance may cause severe burns to skin and eyes.
- Avoid any skin contact.
- Effects of contact or inhalation may be delayed.
- Fire may produce irritating, corrosive and/or toxic gases.
- Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution.

**FIRE OR EXPLOSION**

- Combustible material: may burn but does not ignite readily.
- When heated, vapors may form explosive mixtures with air: indoors, outdoors, and sewers explosion hazards.
- Those substances designated with a "P" may polymerize explosively when heated or involved in a fire.
- Contact with metals may evolve flammable hydrogen gas.
- Containers may explode when heated.
- Runoff may pollute waterways.
- Substance may be transported in a molten form.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate enclosed areas.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

**EVACUATION****Spill**

- See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.



**EMERGENCY RESPONSE****FIRE****Small Fires**

- Dry chemical, CO<sub>2</sub> or water spray.

**Large Fires**

- Dry chemical, CO<sub>2</sub>, alcohol-resistant foam or water spray.
- Move containers from fire area if you can do it without risk.
- Dike fire control water for later disposal; do not scatter the material.

**Fire Involving Tanks or Car/Trailer Loads**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Do not get water inside containers.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Stop leak if you can do it without risk.
- Prevent entry into waterways, sewers, basements or confined areas.
- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
- DO NOT GET WATER INSIDE CONTAINERS.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- **Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.**
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- For minor skin contact, avoid spreading material on unaffected skin.
- Keep victim warm and quiet.
- Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****HEALTH**

- **TOXIC**; inhalation, ingestion, or skin contact with material may cause severe injury or death.
- Contact with molten substance may cause severe burns to skin and eyes.
- Avoid any skin contact.
- Effects of contact or inhalation may be delayed.
- Fire may produce irritating, corrosive and/or toxic gases.
- Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution.

**FIRE OR EXPLOSION**

- Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.
- Some are oxidizers and may ignite combustibles (wood, paper, oil, clothing, etc.).
- Contact with metals may evolve flammable hydrogen gas.
- Containers may explode when heated.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate enclosed areas.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations **ONLY**; it is not effective in spill situations.

**EVACUATION****Spill**

- See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE****Small Fires**

- Dry chemical, CO<sub>2</sub> or water spray.

**Large Fires**

- Dry chemical, CO<sub>2</sub>, alcohol-resistant foam or water spray.
- Move containers from fire area if you can do it without risk.
- Dike fire control water for later disposal; do not scatter the material.

**Fire involving Tanks or Car/Trailer Loads**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Do not get water inside containers.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Stop leak if you can do it without risk.
- Prevent entry into waterways, sewers, basements or confined areas.
- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
- DO NOT GET WATER INSIDE CONTAINERS.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- **Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.**
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- For minor skin contact, avoid spreading material on unaffected skin.
- Keep victim warm and quiet.
- Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- **HIGHLY FLAMMABLE:** Will be easily ignited by heat, sparks or flames.
- Vapors form explosive mixtures with air: indoors, outdoors, and sewers explosion hazards.
- Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Vapors may travel to source of ignition and flash back.
- Substance will react with water (some violently) releasing flammable, toxic or corrosive gases and runoff.
- Contact with metals may evolve flammable hydrogen gas.
- Containers may explode when heated or if contaminated with water.

**HEALTH**

- **TOXIC;** inhalation, ingestion or contact (skin, eyes) with vapors, dusts or substance may cause severe injury, burns, or death.
- **Bromoacetates and chloroacetates are extremely irritating/lachrymators.**
- Reaction with water or moist air will release toxic, corrosive or flammable gases.
- Reaction with water may generate much heat which will increase the concentration of fumes in the air.
- Fire will produce irritating, corrosive and/or toxic gases.
- Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 50 to 100 meters (160 to 330 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate enclosed areas.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

**EVACUATION****Spill**

- See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

- Note: Most foams will react with the material and release corrosive/toxic gases.

**Small Fires** • CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam.

**Large Fires**

- Water spray, fog or alcohol-resistant foam.
- **FOR CHLOROSILANES, DO NOT USE WATER**; use AFFF alcohol-resistant medium expansion foam.
- Move containers from fire area if you can do it without risk.
- Use water spray or fog; do not use straight streams.

**Fire involving Tanks or Car/Trailer Loads**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Do not get water inside containers.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Stop leak if you can do it without risk.
- A vapor suppressing foam may be used to reduce vapors.
- **FOR CHLOROSILANES**, use AFFF alcohol-resistant medium expansion foam to reduce vapors.
- **DO NOT GET WATER on spilled substance or inside containers.**
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- Prevent entry into waterways, sewers, basements or confined areas.

**Small Spills** • Cover with DRY earth, DRY sand, or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.

- Use clean non-sparking tools to collect material and place it into loosely covered plastic containers for later disposal.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- **Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.**
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- For minor skin contact, avoid spreading material on unaffected skin.
- Keep victim warm and quiet.
- Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- Combustible material: may burn but does not ignite readily.
- Substance will react with water (some violently) releasing flammable, toxic or corrosive gases and runoff.
- When heated, vapors may form explosive mixtures with air: indoors, outdoors, and sewers explosion hazards.
- Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Vapors may travel to source of ignition and flash back.
- Contact with metals may evolve flammable hydrogen gas.
- Containers may explode when heated or if contaminated with water.

**HEALTH**

- TOXIC; inhalation, ingestion or contact (skin, eyes) with vapors, dusts or substance may cause severe injury, burns, or death.
- Reaction with water or moist air will release toxic, corrosive or flammable gases.
- Reaction with water may generate much heat which will increase the concentration of fumes in the air.
- Fire will produce irritating, corrosive and/or toxic gases.
- Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 50 to 100 meters (160 to 330 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate enclosed areas.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

**EVACUATION****Spill**

- See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

- Note: Most foams will react with the material and release corrosive/toxic gases.

**Small Fires** • CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam.

**Large Fires**

- Water spray, fog or alcohol-resistant foam.
- **FOR CHLOROSILANES, DO NOT USE WATER**; use AFFF alcohol-resistant medium expansion foam.
- Move containers from fire area if you can do it without risk.
- Use water spray or fog; do not use straight streams.

**Fire involving Tanks or Car/Trailer Loads**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Do not get water inside containers.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- **ALWAYS** stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- **ELIMINATE** all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Stop leak if you can do it without risk.
- A vapor suppressing foam may be used to reduce vapors.
- **FOR CHLOROSILANES**, use AFFF alcohol-resistant medium expansion foam to reduce vapors.
- **DO NOT GET WATER on spilled substance or inside containers.**
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- Prevent entry into waterways, sewers, basements or confined areas.

**Small Spills** • Cover with DRY earth, DRY sand, or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.

- Use clean non-sparking tools to collect material and place it into loosely covered plastic containers for later disposal.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- **Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.**
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- For minor skin contact, avoid spreading material on unaffected skin.
- Keep victim warm and quiet.
- Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****HEALTH**

- **TOXIC**; inhalation, ingestion or contact (skin, eyes) with vapors, dusts or substance may cause severe injury, burns, or death.
- Reaction with water or moist air will release toxic, corrosive or flammable gases.
- Reaction with water may generate much heat which will increase the concentration of fumes in the air.
- Fire will produce irritating, corrosive and/or toxic gases.
- Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution.

**FIRE OR EXPLOSION**

- Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.
- Vapors may accumulate in confined areas (basement, tanks, hopper/tank cars etc.).
- Substance will react with water (some violently), releasing corrosive and/or toxic gases.
- Reaction with water may generate much heat which will increase the concentration of fumes in the air.
- Contact with metals may evolve flammable hydrogen gas.
- Containers may explode when heated or if contaminated with water.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 50 to 100 meters (160 to 330 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate enclosed areas.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations **ONLY**; it is not effective in spill situations.

**EVACUATION****Spill**

- See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

**Fire**

- If tank, rail car or tank truck is involved in a fire, **ISOLATE** for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.



**EMERGENCY RESPONSE****FIRE**

- Note: Most foams will react with the material and release corrosive/toxic gases.
- Small Fires** • CO<sub>2</sub> (except for Cyanides), dry chemical, dry sand, alcohol-resistant foam.

**Large Fires**

- Water spray, fog or alcohol-resistant foam.
- Move containers from fire area if you can do it without risk.
- Use water spray or fog; do not use straight streams.
- Dike fire control water for later disposal; do not scatter the material.

**Fire involving Tanks or Car/Trailer Loads**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Do not get water inside containers.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Stop leak if you can do it without risk.
- A vapor suppressing foam may be used to reduce vapors.
- DO NOT GET WATER INSIDE CONTAINERS.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- Prevent entry into waterways, sewers, basements or confined areas.

**Small Spills** • Cover with DRY earth, DRY sand, or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.

- Use clean non-sparking tools to collect material and place it into loosely covered plastic containers for later disposal.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- **Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.**
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- For minor skin contact, avoid spreading material on unaffected skin.
- Keep victim warm and quiet.
- Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****HEALTH**

- Inhalation or contact with substance may cause infection, disease, or death.
- Runoff from fire control may cause pollution.
- **Note: Damaged packages containing solid CO<sub>2</sub> as a refrigerant may produce water or frost from condensation of air. Do not touch this liquid as it could be contaminated by the contents of the parcel.**

**FIRE OR EXPLOSION**

- Some of these materials may burn, but none ignite readily.
- Some may be transported in flammable liquids.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 10 to 25 meters (30 to 80 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Obtain identity of substance involved.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

**EMERGENCY RESPONSE****FIRE****Small Fires**

- Dry chemical, soda ash, lime or sand.

**Large Fires**

- Use extinguishing agent suitable for type of surrounding fire.
- Move containers from fire area if you can do it without risk.
- Do not scatter spilled material with high pressure water streams.

**SPILL OR LEAK**

- Do not touch or walk through spilled material.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Absorb with earth, sand or other non-combustible material.
- Cover damaged package or spilled material with damp towel or rag and keep wet with liquid bleach or other disinfectant.
- **DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST.**

**FIRST AID**

- Move victim to a safe isolated area.

**CAUTION: Victim may be a source of contamination.**

- Call 911 or emergency medical service.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
- **For further assistance, contact your local Poison Control Center.**
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****HEALTH**

- Inhalation of vapors or dust is extremely irritating.
- May cause burning of eyes and flow of tears.
- May cause coughing, difficult breathing and nausea.
- Brief exposure effects last only a few minutes.
- Exposure in an enclosed area may be very harmful.
- Fire will produce irritating, corrosive and/or toxic gases.
- Runoff from fire control or dilution water may cause pollution.

**FIRE OR EXPLOSION**

- Some of these materials may burn, but none ignite readily.
- Containers may explode when heated.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 100 meters (330 feet).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE****Small Fires**

- Dry chemical, CO<sub>2</sub>, water spray or regular foam.

**Large Fires**

- Water spray, fog or regular foam.
- Move containers from fire area if you can do it without risk.
- Dike fire control water for later disposal; do not scatter the material.

**Fire involving Tanks or Car/Trailer Loads**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Do not get water inside containers.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**SPILL OR LEAK**

- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire.

**Small Spills**

- Take up with sand or other noncombustible absorbent material and place into containers for later disposal.

**Large Spills**

- Dike far ahead of liquid spill for later disposal.
- Prevent entry into waterways, sewers, basements or confined areas.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- **Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.**
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- For minor skin contact, avoid spreading material on unaffected skin.
- Keep victim warm and quiet.
- Effects should disappear after individual has been exposed to fresh air for approximately 10 minutes.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****HEALTH**

- Vapors may cause dizziness or suffocation.
- Exposure in an enclosed area may be very harmful.
- Contact may irritate or burn skin and eyes.
- Fire may produce irritating and/or toxic gases.
- Runoff from fire control or dilution water may cause pollution.

**FIRE OR EXPLOSION**

- Some of these materials may burn, but none ignite readily.
- Most vapors are heavier than air.
- Air/vapor mixtures may explode when ignited.
- Container may explode in heat of fire.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 100 meters (330 feet).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE****Small Fires**

- Dry chemical, CO<sub>2</sub> or water spray.

**Large Fires**

- Dry chemical, CO<sub>2</sub>, alcohol-resistant foam or water spray.
- Move containers from fire area if you can do it without risk.
- Dike fire control water for later disposal; do not scatter the material.

**Fire involving Tanks or Car/Trailer Loads**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Stop leak if you can do it without risk.

**Small Liquid Spills**

- Take up with sand, earth or other noncombustible absorbent material.

**Large Spills**

- Dike far ahead of liquid spill for later disposal.
- Prevent entry into waterways, sewers, basements or confined areas.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- For minor skin contact, avoid spreading material on unaffected skin.
- Wash skin with soap and water.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## **POTENTIAL HAZARDS**

### **HEALTH**

- Radiation presents minimal risk to transport workers, emergency response personnel, and the public during transportation accidents. Packaging durability increases as potential hazard of radioactive content increases.
- Very low levels of contained radioactive materials and low radiation levels outside packages result in low risks to people. Damaged packages may release measurable amounts of radioactive material, but the resulting risks are expected to be low.
- Some radioactive materials cannot be detected by commonly available instruments.
- Packages do not have RADIOACTIVE I, II, or III labels. Some may have EMPTY labels or may have the word "Radioactive" in the package marking.

### **FIRE OR EXPLOSION**

- Some of these materials may burn, but most do not ignite readily.
- Many have cardboard outer packaging; content (physically large or small) can be of many different physical forms.
- Radioactivity does not change flammability or other properties of materials.

## **PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- **Priorities for rescue, life-saving, first aid, and control of fire and other hazards are higher than the priority for measuring radiation levels.**
- Radiation Authority must be notified of accident conditions. Radiation Authority is usually responsible for decisions about radiological consequences and closure of emergencies.
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Stay upwind.
- Keep unauthorized personnel away.
- Detain or isolate uninjured persons or equipment suspected to be contaminated; delay decontamination and cleanup until instructions are received from Radiation Authority.

### **PROTECTIVE CLOTHING**

- Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide adequate protection.

### **EVACUATION**

#### **Large Spill**

- Consider initial downwind evacuation for at least 100 meters (330 feet).

#### **Fire**

- When a large quantity of this material is involved in a major fire, consider an initial evacuation distance of 300 meters (1000 feet) in all directions.



**EMERGENCY RESPONSE****FIRE**

- Presence of radioactive material will not influence the fire control processes and should not influence selection of techniques.
- Move containers from fire area if you can do it without risk.
- Do not move damaged packages; move undamaged packages out of fire zone.

**Small Fires**

- Dry chemical, CO<sub>2</sub>, water spray or regular foam.

**Large Fires**

- Water spray, fog (flooding amounts).

**SPILL OR LEAK**

- Do not touch damaged packages or spilled material.
- Cover liquid spill with sand, earth or other noncombustible absorbent material.
- Cover powder spill with plastic sheet or tarp to minimize spreading.

**FIRST AID**

- Medical problems take priority over radiological concerns.
- Use first aid treatment according to the nature of the injury.
- Do not delay care and transport of a seriously injured person.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Injured persons contaminated by contact with released material are not a serious hazard to health care personnel, equipment or facilities.
- Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

**POTENTIAL HAZARDS****HEALTH**

- Radiation presents minimal risk to transport workers, emergency response personnel, and the public during transportation accidents. Packaging durability increases as potential hazard of radioactive content increases.
- Undamaged packages are safe. Contents of damaged packages may cause higher external radiation exposure, or both external and internal radiation exposure if contents are released.
- Low radiation hazard when material is inside container. If material is released from package or bulk container, hazard will vary from low to moderate. Level of hazard will depend on the type and amount of radioactivity, the kind of material it is in, and/or the surfaces it is on.
- Some material may be released from packages during accidents of moderate severity but risks to people are not great.
- Released radioactive materials or contaminated objects usually will be visible if packaging fails.
- Some exclusive use shipments of bulk and packaged materials will not have "RADIOACTIVE" labels. • Placards, markings, and shipping papers provide identification.
- Some packages may have a "RADIOACTIVE" label and a second hazard label. The second hazard is usually greater than the radiation hazard; so follow this Guide as well as the response Guide for the second hazard class label.
- Some radioactive materials cannot be detected by commonly available instruments.
- Runoff from control of cargo fire may cause low-level pollution.

**FIRE OR EXPLOSION**

- Some of these materials may burn, but most do not ignite readily.
- Uranium and Thorium metal cuttings may ignite spontaneously if exposed to air (see Guide 136).
- Nitrates are oxidizers and may ignite other combustibles (see Guide 141).

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- **Priorities for rescue, life-saving, first aid, and control of fire and other hazards are higher than the priority for measuring radiation levels.**
- Radiation Authority must be notified of accident conditions. Radiation Authority is usually responsible for decisions about radiological consequences and closure of emergencies.
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. • Stay upwind. • Keep unauthorized personnel away.
- Detain or isolate uninjured persons or equipment suspected to be contaminated; delay decontamination and cleanup until instructions are received from Radiation Authority.

**PROTECTIVE CLOTHING**

- Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide adequate protection.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 100 meters (330 feet).

**Fire**

- When a large quantity of this material is involved in a major fire, consider an initial evacuation distance of 300 meters (1000 feet) in all directions.

**EMERGENCY RESPONSE****FIRE**

- Presence of radioactive material will not influence the fire control processes and should not influence selection of techniques.
- Move containers from fire area if you can do it without risk.
- Do not move damaged packages; move undamaged packages out of fire zone.

**Small Fires**

- Dry chemical, CO<sub>2</sub>, water spray or regular foam.

**Large Fires**

- Water spray, fog (flooding amounts).
- Dike fire-control water for later disposal.

**SPILL OR LEAK**

- Do not touch damaged packages or spilled material.
- Cover liquid spill with sand, earth or other noncombustible absorbent material.
- Dike to collect large liquid spills.
- Cover powder spill with plastic sheet or tarp to minimize spreading.

**FIRST AID**

- Medical problems take priority over radiological concerns.
- Use first aid treatment according to the nature of the injury.
- Do not delay care and transport of a seriously injured person.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- In case of contact with substance, wipe from skin immediately; flush skin or eyes with running water for at least 20 minutes.
- Injured persons contaminated by contact with released material are not a serious hazard to health care personnel, equipment or facilities.
- Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

**POTENTIAL HAZARDS****HEALTH**

- Radiation presents minimal risk to transport workers, emergency response personnel, and the public during transportation accidents. Packaging durability increases as potential hazard of radioactive content increases.
- Undamaged packages are safe. Contents of damaged packages may cause higher external radiation exposure, or both external and internal radiation exposure if contents are released.
- Type A packages (cartons, boxes, drums, articles, etc.) identified as "Type A" by marking on packages or by shipping papers contain non-life endangering amounts. Partial releases might be expected if "Type A" packages are damaged in moderately severe accidents.
- Type B packages, and the rarely occurring Type C packages, (large and small, usually metal) contain the most hazardous amounts. They can be identified by package markings or by shipping papers. Life threatening conditions may exist only if contents are released or package shielding fails. Because of design, evaluation, and testing of packages, these conditions would be expected only for accidents of utmost severity.
- The rarely occurring "Special Arrangement" shipments may be of Type A, Type B or Type C packages. Package type will be marked on packages, and shipment details will be on shipping papers.
- Radioactive White-I labels indicate radiation levels outside single, isolated, undamaged packages are very low (less than 0.005 mSv/h (0.5 mrem/h)).
- Radioactive Yellow-II and Yellow-III labeled packages have higher radiation levels. The transport index (TI) on the label identifies the maximum radiation level in mrem/h one meter from a single, isolated, undamaged package.
- Some radioactive materials cannot be detected by commonly available instruments.
- Water from cargo fire control may cause pollution.

**FIRE OR EXPLOSION**

- Some of these materials may burn, but most do not ignite readily.
- Radioactivity does not change flammability or other properties of materials.
- Type B packages are designed and evaluated to withstand total engulfment in flames at temperatures of 800°C (1475°F) for a period of 30 minutes.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- **Priorities for rescue, life-saving, first aid, and control of fire and other hazards are higher than the priority for measuring radiation levels.**
- Radiation Authority must be notified of accident conditions. Radiation Authority is usually responsible for decisions about radiological consequences and closure of emergencies.
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
  - Stay upwind.
  - Keep unauthorized personnel away.
- Detain or isolate uninjured persons or equipment suspected to be contaminated; delay decontamination and cleanup until instructions are received from Radiation Authority.

**PROTECTIVE CLOTHING**

- Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide adequate protection against internal radiation exposure, but not external radiation exposure.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 100 meters (330 feet).

**Fire**

- When a large quantity of this material is involved in a major fire, consider an initial evacuation distance of 300 meters (1000 feet) in all directions.

**EMERGENCY RESPONSE****FIRE**

- Presence of radioactive material will not influence the fire control processes and should not influence selection of techniques.
- Move containers from fire area if you can do it without risk.
- Do not move damaged packages; move undamaged packages out of fire zone.

**Small Fires**

- Dry chemical, CO<sub>2</sub>, water spray or regular foam.

**Large Fires**

- Water spray, fog (flooding amounts).
- Dike fire-control water for later disposal.

**SPILL OR LEAK**

- Do not touch damaged packages or spilled material.
- Damp surfaces on undamaged or slightly damaged packages are seldom an indication of packaging failure. Most packaging for liquid content have inner containers and/or inner absorbent materials.
- Cover liquid spill with sand, earth or other noncombustible absorbent material.

**FIRST AID**

- Medical problems take priority over radiological concerns.
- Use first aid treatment according to the nature of the injury.
- Do not delay care and transport of a seriously injured person.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Injured persons contaminated by contact with released material are not a serious hazard to health care personnel, equipment or facilities.
- Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

**POTENTIAL HAZARDS****HEALTH**

- Radiation presents minimal risk to transport workers, emergency response personnel, and the public during transportation accidents. Packaging durability increases as potential hazard of radioactive content increases.
- Undamaged packages are safe; contents of damaged packages may cause external radiation exposure, and much higher external exposure if contents (source capsules) are released.
- Contamination and internal radiation hazards are not expected, but not impossible.
- Type A packages (cartons, boxes, drums, articles, etc.) identified as "Type A" by marking on packages or by shipping papers contain non-life endangering amounts. Radioactive sources may be released if "Type A" packages are damaged in moderately severe accidents.
- Type B packages, and the rarely occurring Type C packages, (large and small, usually metal) contain the most hazardous amounts. They can be identified by package markings or by shipping papers. Life threatening conditions may exist only if contents are released or package shielding fails. Because of design, evaluation, and testing of packages, these conditions would be expected only for accidents of utmost severity.
- Radioactive White-I labels indicate radiation levels outside single, isolated, undamaged packages are very low (less than 0.005 mSv/h (0.5 mrem/h)).
- Radioactive Yellow-II and Yellow-III labeled packages have higher radiation levels. The transport index (TI) on the label identifies the maximum radiation level in mrem/h one meter from a single, isolated, undamaged package.
- Radiation from the package contents, usually in durable metal capsules, can be detected by most radiation instruments.
- Water from cargo fire control is not expected to cause pollution.

**FIRE OR EXPLOSION**

- Packagings can burn completely without risk of content loss from sealed source capsule.
- Radioactivity does not change flammability or other properties of materials.
- Radioactive source capsules and Type B packages are designed and evaluated to withstand total engulfment in flames at temperatures of 800°C (1475°F).

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first.** If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
- Priorities for rescue, life-saving, first aid, and control of fire and other hazards are higher than the priority for measuring radiation levels.
- Radiation Authority must be notified of accident conditions. Radiation Authority is usually responsible for decisions about radiological consequences and closure of emergencies.
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Stay upwind. • Keep unauthorized personnel away.
- Delay final cleanup until instructions or advice is received from Radiation Authority.

**PROTECTIVE CLOTHING**

- Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide adequate protection against internal radiation exposure, but not external radiation exposure.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 100 meters (330 feet).

**Fire**

- When a large quantity of this material is involved in a major fire, consider an initial evacuation distance of 300 meters (1000 feet) in all directions.

**EMERGENCY RESPONSE****FIRE**

- Presence of radioactive material will not influence the fire control processes and should not influence selection of techniques.
- Move containers from fire area if you can do it without risk.
- Do not move damaged packages; move undamaged packages out of fire zone.

**Small Fires**

- Dry chemical, CO<sub>2</sub>, water spray or regular foam.

**Large Fires**

- Water spray, fog (flooding amounts).

**SPILL OR LEAK**

- Do not touch damaged packages or spilled material.
- Damp surfaces on undamaged or slightly damaged packages are seldom an indication of packaging failure. Contents are seldom liquid. Content is usually a metal capsule, easily seen if released from package.
- If source capsule is identified as being out of package, **DO NOT TOUCH**. Stay away and await advice from Radiation Authority.

**FIRST AID**

- Medical problems take priority over radiological concerns.
- Use first aid treatment according to the nature of the injury.
- Do not delay care and transport of a seriously injured person.
- Persons exposed to special form sources are not likely to be contaminated with radioactive material.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Injured persons contaminated by contact with released material are not a serious hazard to health care personnel, equipment or facilities.
- Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

**POTENTIAL HAZARDS****HEALTH**

- Radiation presents minimal risk to transport workers, emergency response personnel, and the public during transportation accidents. Packaging durability increases as potential radiation and criticality hazards of the content increase.
- Undamaged packages are safe. Contents of damaged packages may cause higher external radiation exposure, or both external and internal radiation exposure if contents are released.
- Type AF or IF packages, identified by package markings, do not contain life-threatening amounts of material. External radiation levels are low and packages are designed, evaluated, and tested to control releases and to prevent a fission chain reaction under severe transport conditions.
- Type B(U)F, B(M)F and CF packages (identified by markings on packages or shipping papers) contain potentially life endangering amounts. Because of design, evaluation, and testing of packages, fission chain reactions are prevented and releases are not expected to be life endangering for all accidents except those of utmost severity.
- The rarely occurring "Special Arrangement" shipments may be of Type AF, BF or CF packages. Package type will be marked on packages, and shipment details will be on shipping papers.
- The transport index (TI) shown on labels or a shipping paper might not indicate the radiation level at one meter from a single, isolated, undamaged package; instead, it might relate to controls needed during transport because of the fissile properties of the materials.
- Some radioactive materials cannot be detected by commonly available instruments.
- Water from cargo fire control is not expected to cause pollution.

**FIRE OR EXPLOSION**

- These materials are seldom flammable. Packages are designed to withstand fires without damage to contents.
- Radioactivity does not change flammability or other properties of materials.
- Type AF, IF, B(U)F, B(M)F and CF packages are designed and evaluated to withstand total engulfment in flames at temperatures of 800°C (1475°F) for a period of 30 minutes.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- **Priorities for rescue, life-saving, first aid, and control of fire and other hazards are higher than the priority for measuring radiation levels.**
- Radiation Authority must be notified of accident conditions. Radiation Authority is usually responsible for decisions about radiological consequences and closure of emergencies.
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
  - Stay upwind.
  - Keep unauthorized personnel away.
- Detain or isolate uninjured persons or equipment suspected to be contaminated; delay decontamination and cleanup until instructions are received from Radiation Authority.

**PROTECTIVE CLOTHING**

- Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide adequate protection against internal radiation exposure, but not external radiation exposure.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 100 meters (330 feet).

**Fire**

- When a large quantity of this material is involved in a major fire, consider an initial evacuation distance of 300 meters (1000 feet) in all directions.



**EMERGENCY RESPONSE****FIRE**

- Presence of radioactive material will not influence the fire control processes and should not influence selection of techniques.
- Move containers from fire area if you can do it without risk.
- Do not move damaged packages; move undamaged packages out of fire zone.

**Small Fires**

- Dry chemical, CO<sub>2</sub>, water spray or regular foam.

**Large Fires**

- Water spray, fog (flooding amounts).

**SPILL OR LEAK**

- Do not touch damaged packages or spilled material.
- Damp surfaces on undamaged or slightly damaged packages are seldom an indication of packaging failure. Most packaging for liquid content have inner containers and/or inner absorbent materials.

**Liquid Spills**

- Package contents are seldom liquid. If any radioactive contamination resulting from a liquid release is present, it probably will be low-level.

**FIRST AID**

- Medical problems take priority over radiological concerns.
- Use first aid treatment according to the nature of the injury.
- Do not delay care and transport of a seriously injured person.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Injured persons contaminated by contact with released material are not a serious hazard to health care personnel, equipment or facilities.
- Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

**POTENTIAL HAZARDS****HEALTH**

- Radiation presents minimal risk to transport workers, emergency response personnel, and the public during transportation accidents. Packaging durability increases as potential radiation and criticality hazards of the content increase.
- Chemical hazard greatly exceeds radiation hazard.
- Substance reacts with water and water vapor in air to form toxic and corrosive hydrogen fluoride gas and an extremely irritating and corrosive, white-colored, water-soluble residue.
- If inhaled, may be fatal.
- Direct contact causes burns to skin, eyes, and respiratory tract.
- Low-level radioactive material; very low radiation hazard to people.
- Runoff from control of cargo fire may cause low-level pollution.

**FIRE OR EXPLOSION**

- Substance does not burn.
- Containers in protective overpacks (horizontal cylindrical shape with short legs for tie-downs), are identified with "AF" or "B(U)F" on shipping papers or by markings on the overpacks. They are designed and evaluated to withstand severe conditions including total engulfment in flames at temperatures of 800°C (1475°F).
- Bare filled cylinders, identified with UN2978 as part of the marking, may rupture in heat of engulfing fire; bare empty (except for residue) cylinders will not rupture in fires.
- The material may react violently with fuels.
- Radioactivity does not change flammability or other properties of materials.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- **Priorities for rescue, life-saving, first aid, and control of fire and other hazards are higher than the priority for measuring radiation levels.**
- Radiation Authority must be notified of accident conditions. Radiation Authority is usually responsible for decisions about radiological consequences and closure of emergencies.
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. • Stay upwind. • Keep unauthorized personnel away.
- Detain or isolate uninjured persons or equipment suspected to be contaminated; delay decontamination and cleanup until instructions are received from Radiation Authority.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 100 meters (330 feet).

**Fire**

- When a large quantity of this material is involved in a major fire, consider an initial evacuation distance of 300 meters (1000 feet) in all directions.

**EMERGENCY RESPONSE****FIRE**

- DO NOT USE WATER OR FOAM ON MATERIAL ITSELF.
- Move containers from fire area if you can do it without risk.

**Small Fires**

- Dry chemical or CO<sub>2</sub>.

**Large Fires**

- Water spray, fog or regular foam.
- Cool containers with flooding quantities of water until well after fire is out.
- If this is impossible, withdraw from area and let fire burn.
- ALWAYS stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- Do not touch damaged packages or spilled material.
- Without fire or smoke, leak will be evident by visible and irritating vapors and residue forming at the point of release.
- Use fine water spray to reduce vapors; do not put water directly on point of material release from container.
- Residue buildup may self-seal small leaks.
- Dike far ahead of spill to collect runoff water.

**FIRST AID**

- Medical problems take priority over radiological concerns.
- Use first aid treatment according to the nature of the injury.
- Do not delay care and transport of a seriously injured person.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.
- Injured persons contaminated by contact with released material are not a serious hazard to health care personnel, equipment or facilities.
- Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

**POTENTIAL HAZARDS****HEALTH**

- **TOXIC; may be fatal if inhaled.**
- Vapors are extremely irritating.
- Contact with gas or liquefied gas will cause burns, severe injury and/or frostbite.
- Vapors from liquefied gas are initially heavier than air and spread along ground.
- Runoff from fire control may cause pollution.

**FIRE OR EXPLOSION**

- Substance does not burn but will support combustion.
- This is a strong oxidizer and will react vigorously or explosively with many materials including fuels.
- May ignite combustibles (wood, paper, oil, clothing, etc.).
- Vapor explosion and poison hazard indoors, outdoors or in sewers.
- Containers may explode when heated.
- Ruptured cylinders may rocket.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 100 to 200 meters (330 to 660 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.
- Always wear thermal protective clothing when handling refrigerated/cryogenic liquids.

**EVACUATION****Spill**

- See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 1600 meters (1 mile) in all directions; also, consider initial evacuation for 1600 meters (1 mile) in all directions.

**EMERGENCY RESPONSE****FIRE****Small Fires**

- Dry chemical, soda ash, lime or sand.

**Large Fires**

- Water spray, fog (flooding amounts).
- Do not get water inside containers.
- Move containers from fire area if you can do it without risk.

**Fire involving Tanks**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Do not direct water at source of leak or safety devices; icing may occur.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

**SPILL OR LEAK**

- Do not touch or walk through spilled material.
- If you have not donned special protective clothing approved for this material, do not expose yourself to any risk of this material touching you.
- **Do not direct water at spill or source of leak.**
- A fine water spray remotely directed to the edge of the spill pool can be used to direct and maintain a hot flare fire which will burn the spilled material in a controlled manner.
- Keep combustibles (wood, paper, oil, etc.) away from spilled material.
- Stop leak if you can do it without risk.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- If possible, turn leaking containers so that gas escapes rather than liquid.
- Prevent entry into waterways, sewers, basements or confined areas.
- Isolate area until gas has dispersed.
- Ventilate the area.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Clothing frozen to the skin should be thawed before being removed.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Keep victim warm and quiet. • Keep victim under observation.
- Effects of contact or inhalation may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****HEALTH**

- **TOXIC; Extremely Hazardous.**
- Inhalation extremely dangerous; may be fatal.
- Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite.
- Odorless, will not be detected by sense of smell.

**FIRE OR EXPLOSION**

- **EXTREMELY FLAMMABLE.**
- May be ignited by heat, sparks or flames.
- Flame may be invisible.
- Containers may explode when heated.
- Vapor explosion and poison hazard indoors, outdoors or in sewers.
- Vapors from liquefied gas are initially heavier than air and spread along ground.
- Vapors may travel to source of ignition and flash back.
- Runoff may create fire or explosion hazard.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 100 to 200 meters (330 to 660 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Keep out of low areas.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear chemical protective clothing which is specifically recommended by the manufacturer. It may provide little or no thermal protection.
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations.
- Always wear thermal protective clothing when handling refrigerated/cryogenic liquids.

**EVACUATION****Spill**

- See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

- DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.

**Small Fires**

- Dry chemical, CO<sub>2</sub> or water spray.

**Large Fires**

- Water spray, fog or regular foam.
- Move containers from fire area if you can do it without risk.

**Fire involving Tanks**

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Do not direct water at source of leak or safety devices; icing may occur.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

**SPILL OR LEAK**

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire.
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
- Do not direct water at spill or source of leak.
- If possible, turn leaking containers so that gas escapes rather than liquid.
- Prevent entry into waterways, sewers, basements or confined areas.
- Isolate area until gas has dispersed.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- In case of contact with liquefied gas, thaw frosted parts with lukewarm water.
- Keep victim warm and quiet. • Keep victim under observation.
- Effects of contact or inhalation may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- Substance is transported in molten form at a temperature above 705°C (1300°F).
- Violent reaction with water; contact may cause an explosion or may produce a flammable gas.
- Will ignite combustible materials (wood, paper, oil, debris, etc.).
- Contact with nitrates or other oxidizers may cause an explosion.
- Contact with containers or other materials, including cold, wet or dirty tools, may cause an explosion.
- Contact with concrete will cause spalling and small pops.

**HEALTH**

- Contact causes severe burns to skin and eyes.
- Fire may produce irritating and/or toxic gases.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 50 to 100 meters (160 to 330 feet) in all directions.
- Keep unauthorized personnel away.
- Ventilate closed spaces before entering.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Wear flame retardant structural firefighters' protective clothing, including faceshield, helmet and gloves, this will provide limited thermal protection.



**EMERGENCY RESPONSE****FIRE**

- Do Not Use Water, except in life threatening situations and then only in a fine spray.
- Do not use halogenated extinguishing agents or foam.
- Move combustibles out of path of advancing pool if you can do so without risk.
- Extinguish fires started by molten material by using appropriate method for the burning material; keep water, halogenated extinguishing agents and foam away from the molten material.

**SPILL OR LEAK**

- Do not touch or walk through spilled material.
- Do not attempt to stop leak, due to danger of explosion.
- Keep combustibles (wood, paper, oil, etc.) away from spilled material.
- Substance is very fluid, spreads quickly, and may splash. Do not try to stop it with shovels or other objects.
- Dike far ahead of spill; use dry sand to contain the flow of material.
- Where possible allow molten material to solidify naturally.
- Avoid contact even after material solidifies. Molten, heated and cold aluminum look alike; do not touch unless you know it is cold.
- Clean up under the supervision of an expert after material has solidified.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- For severe burns, immediate medical attention is required.
- Removal of solidified molten material from skin requires medical assistance.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Keep victim warm and quiet.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- May react violently or explosively on contact with water.
- Some are transported in flammable liquids.
- May be ignited by friction, heat, sparks or flames.
- Some of these materials will burn with intense heat.
- Dusts or fumes may form explosive mixtures in air.
- Containers may explode when heated.
- May re-ignite after fire is extinguished.

**HEALTH**

- Oxides from metallic fires are a severe health hazard.
- Inhalation or contact with substance or decomposition products may cause severe injury or death.
- Fire may produce irritating, corrosive and/or toxic gases.
- Runoff from fire control or dilution water may cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Stay upwind.
- Keep unauthorized personnel away.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 50 meters (160 feet).

**Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

- DO NOT USE WATER, FOAM OR CO<sub>2</sub>.
- Dousing metallic fires with water may generate hydrogen gas, an extremely dangerous explosion hazard, particularly if fire is in a confined environment (i.e., building, cargo hold, etc.).
- Use DRY sand, graphite powder, dry sodium chloride based extinguishers, G-1® or Met-L-X® powder.
- Confining and smothering metal fires is preferable rather than applying water.
- Move containers from fire area if you can do it without risk.

**Fire involving Tanks or Car/Trailer Loads**

- If impossible to extinguish, protect surroundings and allow fire to burn itself out.

**SPILL OR LEAK**

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Prevent entry into waterways, sewers, basements or confined areas.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****FIRE OR EXPLOSION**

- Some may burn but none ignite readily.
- Those substances designated with a "P" may polymerize explosively when heated or involved in a fire.
- Containers may explode when heated.
- Some may be transported hot.

**HEALTH**

- Inhalation of material may be harmful.
- Contact may cause burns to skin and eyes.
- Inhalation of Asbestos dust may have a damaging effect on the lungs.
- Fire may produce irritating, corrosive and/or toxic gases.
- Runoff from fire control may cause pollution.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 10 to 25 meters (30 to 80 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

**EVACUATION****Fire**

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

**EMERGENCY RESPONSE****FIRE****Small Fires**

- Dry chemical, CO<sub>2</sub>, water spray or regular foam.

**Large Fires**

- Water spray, fog or regular foam.
- Move containers from fire area if you can do it without risk.
- Do not scatter spilled material with high pressure water streams.
- Dike fire-control water for later disposal.

**Fire involving Tanks**

- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.

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**SPILL OR LEAK**

- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- Prevent dust cloud.
- Avoid inhalation of asbestos dust.

**Small Dry Spills**

- With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.

**Small Spills**

- Take up with sand or other noncombustible absorbent material and place into containers for later disposal.

**Large Spills**

- Dike far ahead of liquid spill for later disposal.
- Cover powder spill with plastic sheet or tarp to minimize spreading.
- Prevent entry into waterways, sewers, basements or confined areas.

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**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**POTENTIAL HAZARDS****HEALTH**

- Inhalation of vapors or contact with substance will result in contamination and potential harmful effects.
- Fire will produce irritating, corrosive and/or toxic gases.

**FIRE OR EXPLOSION**

- Non-combustible, substance itself does not burn but may react upon heating to produce corrosive and/or toxic fumes.
- Runoff may pollute waterways.

**PUBLIC SAFETY**

- **CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- Isolate spill or leak area immediately for at least 10 to 25 meters (30 to 80 feet) in all directions.
- Stay upwind.
- Keep unauthorized personnel away.

**PROTECTIVE CLOTHING**

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

**EVACUATION****Large Spill**

- Consider initial downwind evacuation for at least 100 meters (330 feet).

**Fire**

- When any large container is involved in a fire, consider initial evacuation for 500 meters (1/3 mile) in all directions.

**EMERGENCY RESPONSE****FIRE**

- Use extinguishing agent suitable for type of surrounding fire.
- Do not direct water at the heated metal.

**SPILL OR LEAK**

- Do not touch or walk through spilled material.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Stop leak if you can do it without risk.
- Prevent entry into waterways, sewers, basements or confined areas.
- Do not use steel or aluminum tools or equipment.
- Cover with earth, sand, or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.
- For mercury, use a mercury spill kit.
- Mercury spill areas may be subsequently treated with calcium sulphide/calcium sulfide or with sodium thiosulphate/sodium thiosulfate wash to neutralize any residual mercury.

**FIRST AID**

- Move victim to fresh air. • Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## NOTES



## INTRODUCTION TO THE TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

The Table of Initial Isolation and Protective Action Distances suggests distances useful to protect people from vapors resulting from spills involving dangerous goods which are considered toxic by inhalation (TIH), including certain chemical warfare agents, or which produce toxic gases upon contact with water. The Table provides first responders with initial guidance until technically qualified emergency response personnel are available. **Distances show areas likely to be affected during the first 30 minutes after materials are spilled and could increase with time.**

The **Initial Isolation Zone** defines an area SURROUNDING the incident in which persons may be exposed to dangerous (upwind) and life threatening (downwind) concentrations of material. The **Protective Action Zone** defines an area DOWNWIND from the incident in which persons may become incapacitated and unable to take protective action and/or incur serious or irreversible health effects. The Table provides specific guidance for small and large spills occurring day or night.

Adjusting distances for a specific incident involves many interdependent variables and should be made only by personnel technically qualified to make such adjustments. For this reason, no precise guidance can be provided in this document to aid in adjusting the table distances; however, general guidance follows.

### **Factors That May Change the Protective Action Distances**

**The guide for a material** clearly indicates the evacuation distance required to protect against fragmentation hazard. If the material becomes involved in a **FIRE**, the toxic hazard may become less important than the fire or explosion hazard.

If more than one tank car, cargo tank, portable tank, or large cylinder involved in the incident is leaking, **LARGE SPILL** distances may need to be increased.

For material with a protective action distance of 11.0+ km (7.0+ miles), the actual distance can be larger in certain atmospheric conditions. If the dangerous goods vapor plume is channeled in a valley or between many tall buildings, distances may be larger than shown in the Table due to less mixing of the plume with the atmosphere. Daytime spills in regions with known strong inversions or snow cover, or occurring near sunset, accompanied by a steady wind, may require an increase in protective action distance. When these conditions are present, airborne contaminants mix and disperse more slowly and may travel much farther downwind. In addition, protective action distances may be larger for liquid spills when either the material or outdoor temperature exceeds 30°C (86°F).

Materials which react with water to produce significant toxic gases are included in the Table of Initial Isolation and Protective Action Distances. Note that some materials which are TIH (e.g., bromine trifluoride, thionyl chloride, etc.) produce additional TIH materials when spilled

in water. For these materials, two entries are provided in the Table of Initial Isolation and Protective Action Distances. If it is not clear whether the spill is on land or in water, or in cases where the spill occurs both on land and in water, choose the larger Protective Action Distance. Following the Table of Initial Isolation and Protective Action Distances is a table that lists the materials which, when spilled in water, produce toxic gases and the toxic gases that these water reactive materials produce.

When a water reactive TIH producing material is spilled into a river or stream, the source of the toxic gas may move with the current or stretch from the spill point downstream for a substantial distance.

Certain chemical warfare agents have been added to the Table of Initial Isolation and Protective Action Distances. The distances shown were calculated using worst case scenarios for these agents **when used as a weapon**.

## PROTECTIVE ACTION DECISION FACTORS TO CONSIDER

The choice of protective options for a given situation depends on a number of factors. For some cases, evacuation may be the best option; in others, sheltering in-place may be the best course. Sometimes, these two actions may be used in combination. In any emergency, officials need to quickly give the public instructions. The public will need continuing information and instructions while being evacuated or sheltered in-place.

Proper evaluation of the factors listed below will determine the effectiveness of evacuation or in-place protection. The importance of these factors can vary with emergency conditions. In specific emergencies, other factors may need to be identified and considered as well. This list indicates what kind of information may be needed to make the initial decision.

### **The Dangerous Goods**

- Degree of health hazard
- Amount involved
- Containment/control of release
- Rate of vapor movement

### **The Population Threatened**

- Location
- Number of people
- Time available to evacuate or shelter in-place
- Ability to control evacuation or shelter in-place
- Building types and availability
- Special institutions or populations, e.g., nursing homes, hospitals, prisons

### **Weather Conditions**

- Effect on vapor and cloud movement
- Potential for change
- Effect on evacuation or protection in-place

## PROTECTIVE ACTIONS

**Protective Actions** are those steps taken to preserve the health and safety of emergency responders and the public during an incident involving releases of dangerous goods. The Table of Initial Isolation and Protective Action Distances (green-bordered pages) predicts the size of downwind areas which could be affected by a cloud of toxic gas. People in this area should be evacuated and/or sheltered in-place inside buildings.

**Isolate Hazard Area and Deny Entry** means keep everybody away from the area if they are not directly involved in emergency response operations. Unprotected emergency responders should not be allowed to enter the isolation zone. This "isolation" task is done first to establish control over the area of operations. This is the first step for any protective actions that may follow. See the Table of Isolation and Protective Action Distances (green-bordered pages) for more detailed information on specific materials.

**Evacuate** means move all people from a threatened area to a safer place. To perform an evacuation, there must be enough time for people to be warned, to get ready, and to leave an area. If there is enough time, evacuation is the best protective action. Begin evacuating people nearby and those outdoors in direct view of the scene. When additional help arrives, expand the area to be evacuated downwind and crosswind to at least the extent recommended in this guidebook. Even after people move to the distances recommended, they may not be completely safe from harm. They should not be permitted to congregate at such distances. Send evacuees to a definite place, by a specific route, far enough away so they will not have to be moved again if the wind shifts.

**Shelter In-Place** means people should seek shelter inside a building and remain inside until the danger passes. **Sheltering in-place is used when evacuating the public would cause greater risk than staying where they are, or when an evacuation cannot be performed.** Direct the people inside to **close all doors and windows** and to **shut off all ventilating, heating and cooling systems.** In-place protection may not be the best option if (a) the vapors are flammable; (b) if it will take a long time for the gas to clear the area; or (c) if buildings cannot be closed tightly. Vehicles can offer some protection for a short period if the windows are closed and the ventilating systems are shut off. Vehicles are not as effective as buildings for in-place protection.

**It is vital to maintain communications with competent persons inside the building** so that they are advised about changing conditions. **Persons protected-in-place should be warned to stay far from windows** because of the danger from glass and projected metal fragments in a fire and/or explosion.

Every dangerous goods incident is different. Each will have special problems and concerns. Action to protect the public must be selected carefully. These pages can help with **initial** decisions on how to protect the public. Officials must continue to gather information and monitor the situation until the threat is removed.

## BACKGROUND ON THE INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCE TABLE

Initial Isolation and Protective Action Distances in this guidebook were determined for small and large spills occurring during day or night. The overall analysis was statistical in nature and utilized state-of-the-art emission rate and dispersion models; statistical release data from the U.S. DOT HMIS (Hazardous Materials Incident Reporting System) database; 5 years of meteorological observations from over 120 locations in United States, Canada and Mexico; and the most current toxicological exposure guidelines.

For each chemical, thousands of hypothetical releases were modeled to account for the statistical variation in both release amount and atmospheric conditions. Based on this statistical sample, the 90% percentile Protective Action Distance for each chemical and category was selected to appear in the Table. A brief description of the analysis is provided below. A detailed report outlining the methodology and data used in the generation of the Initial Isolation and Protective Action Distances may be obtained from the U.S. Department of Transportation, Research and Special Programs Administration.

**Release amounts and emission rates** into the atmosphere were statistically modeled based on (1) data from the U.S. DOT HMIS database; (2) container types and sizes authorized for transport as specified in 49 CFR §172.101 and Part 173; (3) physical properties of the materials involved, and (4) atmospheric data from a historical database. The emission model calculated the release of vapor due to evaporation of pools on the ground, direct release of vapors from the container, or a combination of both, as would occur for liquefied gases which can flash to form both a vapor/aerosol mixture and an evaporating pool. In addition, the emission model also calculated the emission of toxic vapor by-products generated from spilling water-reactive chemicals in water. Spills that involve releases of approximately 200 liters or less are considered Small Spills, while spills that involve quantities greater than 200 liters are considered Large Spills.

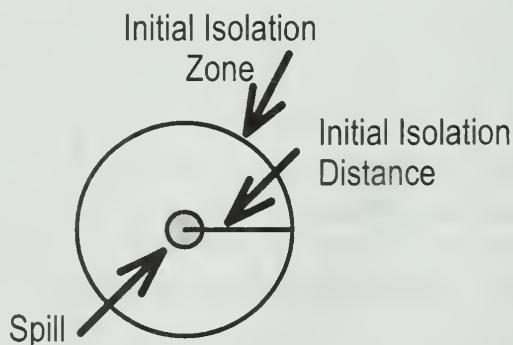
**Downwind dispersion** of the vapor was estimated for each case modeled. Atmospheric parameters affecting the dispersion, and the emission rate, were selected in a statistical fashion from a database containing hourly meteorological data from 120 cities in United States, Canada and Mexico. The dispersion calculation accounted for the time dependent emission rate from the source as well as the density of the vapor plume (i.e., heavy gas effects). Since atmospheric mixing is less effective at dispersing vapor plumes during nighttime, day and night were separated in the analysis. In the Table, "Day" refers to time periods after sunrise and before sunset, while "Night" includes all hours between sunset and sunrise.

**Toxicological short-term exposure guidelines** for the chemicals were applied to determine the downwind distance to which persons may become incapacitated and unable to take protective action or may incur serious health effects. Toxicological exposure guidelines were chosen from (1) emergency response guidelines, (2) occupational health guidelines, or (3) lethal concentrations determined from animal studies, as recommended by an independent panel of toxicological experts from industry and academia.

## HOW TO USE THE TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

- (1) The responder should already have:
  - Identified the material by its ID Number and Name; (if an ID Number cannot be found, use the name of material index in the blue-bordered pages to locate that number.)
  - Found the three-digit guide for that material in order to consult the emergency actions recommended jointly with this table;
  - **Noted the wind direction.**
- (2) Look in this Table (the green-bordered pages) for the ID Number and Name of the Material involved in the incident. Some ID Numbers have more than one shipping name listed—look for the specific name of the material. (If the shipping name is not known and the Table lists more than one name for the same ID Number, use the entry with the largest protective action distances.)
- (3) Determine if the incident involves a SMALL or LARGE spill and if DAY or NIGHT. Generally, a SMALL SPILL is one which involves a single, small package (e.g., a drum containing up to approximately 200 liters), a small cylinder, or a small leak from a large package. A LARGE SPILL is one which involves a spill from a large package, or multiple spills from many small packages. DAY is any time after sunrise and before sunset. NIGHT is any time between sunset and sunrise.

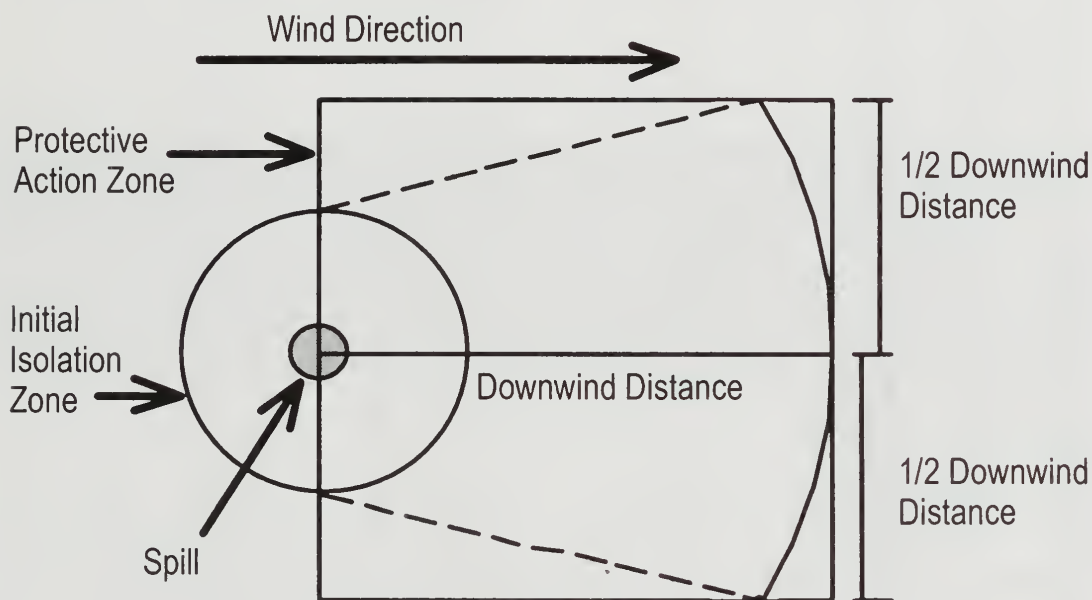
- (4) Look up the initial ISOLATION distance. Direct all persons to move, in a crosswind direction, away from the spill to the distance specified—in meters and feet.



- (5) Look up the initial PROTECTIVE ACTION DISTANCE shown in the Table. For a given dangerous goods, spill size, and whether day or night, the Table gives the downwind distance—in kilometers and miles—for which protective actions should be considered. For practical purposes, the Protective Action Zone (i.e., the area in which people are at risk of harmful exposure) is a square, whose length and width are the same as the downwind distance shown in the Table.

- (6) Initiate Protective Actions to the extent possible, beginning with those closest to the spill site and working away from the site in the downwind direction. When a water-reactive TIH producing material is spilled into a river or stream, the source of the toxic gas may move with the current or stretch from the spill point downstream for a substantial distance.

The shape of the area in which protective actions should be taken (the Protective Action Zone) is shown in this figure. The spill is located at the center of the small circle. The larger circle represents the INITIAL ISOLATION zone around the spill.



**NOTE:** See "Introduction To The Table Of Initial Isolation And Protective Action Distances" for factors which may increase or decrease Protective Action Distances.

Call the emergency response telephone number listed on the shipping paper, or the appropriate response agency as soon as possible for additional information on the material, safety precautions, and mitigation procedures.

# TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

ID No.	NAME OF MATERIAL	SMALL SPILLS (From a small package or small leak from a large package)				LARGE SPILLS (From a large package or from many small packages)			
		First ISOLATE in all Directions Meters (Feet)	Then PROTECT persons Downwind during-		First ISOLATE in all Directions Meters (Feet)	Then PROTECT persons Downwind during-			
			DAY Kilometers (Miles)	NIGHT Kilometers (Miles)		DAY Kilometers (Miles)	NIGHT Kilometers (Miles)		
1005	Ammonia, anhydrous	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.1 km (0.7 mi)		
1005	Ammonia, anhydrous, liquefied								
1005	Ammonia, solution, with more than 50% Ammonia								
1005	Anhydrous ammonia								
1005	Anhydrous ammonia, liquefied								
1008	Boron trifluoride	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	215 m (700 ft)	1.6 km (1.0 mi)	5.1 km (3.2 mi)		
1008	Boron trifluoride, compressed								
1016	Carbon monoxide	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	125 m (400 ft)	0.6 km (0.4 mi)	1.8 km (1.1 mi)		
1016	Carbon monoxide, compressed								
1017	Chlorine	30 m (100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	275 m (900 ft)	2.7 km (1.7 mi)	6.8 km (4.2 mi)		
1023	Coal gas	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.3 km (0.2 mi)	0.5 km (0.3 mi)		
1023	Coal gas, compressed								
1026	Cyanogen	30 m (100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	305 m (1000 ft)	3.1 km (1.9 mi)	7.7 km (4.8 mi)		
1026	Cyanogen, liquefied								
1026	Cyanogen gas								
1040	Ethylene oxide	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.8 km (1.1 mi)		
1040	Ethylene oxide with Nitrogen								
1045	Fluorine	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	185 m (600 ft)	1.4 km (0.9 mi)	4.0 km (2.5 mi)		
1045	Fluorine, compressed								
1048	Hydrogen bromide, anhydrous	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	125 m (400 ft)	1.1 km (0.7 mi)	3.4 km (2.1 mi)		
1050	Hydrogen chloride, anhydrous	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)		
1051	AC (when used as a weapon)	60 m (200 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	460 m (1500 ft)	1.6 km (1.0 mi)	3.9 km (2.4 mi)		



1051	Hydrocyanic acid, aqueous solutions, with more than 20% Hydrogen cyanide	60 m (200 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	400 m (1300 ft)	1.3 km (0.8 mi)	3.4 km (2.1 mi)
1051	Hydrocyanic acid, liquefied						
1051	Hydrogen cyanide, anhydrous, stabilized						
1051	Hydrogen cyanide, stabilized						
1052	Hydrogen fluoride, anhydrous	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	125 m (400 ft)	1.1 km (0.7 mi)	2.9 km (1.8 mi)
1053	Hydrogen sulfide	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	215 m (700 ft)	1.4 km (0.9 mi)	4.3 km (2.7 mi)
1053	Hydrogen sulfide, liquefied						
1053	Hydrogen sulphide						
1053	Hydrogen sulphide, liquefied						
1062	Methyl bromide	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	95 m (300 ft)	0.5 km (0.3 mi)	1.4 km (0.9 mi)
1064	Methyl mercaptan	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	95 m (300 ft)	0.8 km (0.5 mi)	2.7 km (1.7 mi)
1067	Dinitrogen tetroxide	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	305 m (1000 ft)	1.3 km (0.8 mi)	3.9 km (2.4 mi)
1067	Dinitrogen tetroxide, liquefied						
1067	Nitrogen dioxide						
1067	Nitrogen dioxide, liquefied						
1067	Nitrogen peroxide, liquid						
1067	Nitrogen tetroxide, liquid						
1069	Nitrosyl chloride	30 m (100 ft)	0.3 km (0.2 mi)	1.4 km (0.9 mi)	365 m (1200 ft)	3.5 km (2.2 mi)	9.8 km (6.1 mi)
1071	Oil gas	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	0.5 km (0.3 mi)
1071	Oil gas, compressed						
1076	CG (when used as a weapon)	155 m (500 ft)	1.3 km (0.8 mi)	3.2 km (2.0 mi)	765 m (2500 ft)	7.2 km (4.5 mi)	11.0+ km (7.0+ mi)
1076	Diphosgene	60 m (200 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	95 m (300 ft)	1.0 km (0.6 mi)	1.9 km (1.2 mi)
1076	DP (when used as a weapon)	60 m (200 ft)	0.3 km (0.2 mi)	1.0 km (0.6 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.5 km (2.8 mi)
1076	Phosgene	95 m (300 ft)	0.8 km (0.5 mi)	2.7 km (1.7 mi)	765 m (2500 ft)	6.6 km (4.1 mi)	11.0 km (6.9 mi)
1079	Sulfur dioxide	30 m (100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	185 m (600 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)
1079	Sulfur dioxide, liquefied						
1079	Sulphur dioxide						
1079	Sulphur dioxide, liquefied						

"+" means distance can be larger in certain atmospheric conditions

# TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

		SMALL SPILLS (From a small package or small leak from a large package)				LARGE SPILLS (From a large package or from many small packages)			
ID No.	NAME OF MATERIAL	First ISOLATE in all Directions		Then PROTECT persons Downwind during-		First ISOLATE in all Directions		Then PROTECT persons Downwind during-	
		Meters (Feet)	Kilometers (Miles)	DAY Kilometers (Miles)	NIGHT Kilometers (Miles)	Meters (Feet)	Kilometers (Miles)	DAY Kilometers (Miles)	NIGHT Kilometers (Miles)
1082	Trifluorochloroethylene	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	0.8 km (0.5 mi)
1082	Trifluorochloroethylene, inhibited	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	0.8 km (0.5 mi)
1092	Acrolein, inhibited	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	1.6 km (1.0 mi)	400 m (1300 ft)	3.9 km (2.4 mi)	7.9 km (4.9 mi)	7.9 km (4.9 mi)
1098	Allyl alcohol	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	0.6 km (0.4 mi)
1135	Ethylene chlorohydrin	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	60 m (200 ft)	0.6 km (0.4 mi)	1.3 km (0.8 mi)	1.3 km (0.8 mi)
1143	Crotonaldehyde, inhibited	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	0.8 km (0.5 mi)
1143	Crotonaldehyde, stabilized	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	0.8 km (0.5 mi)
1162	Dimethyldichlorosilane (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	125 m (400 ft)	1.1 km (0.7 mi)	2.9 km (1.8 mi)	2.9 km (1.8 mi)
1163	1,1-Dimethylhydrazine	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.1 km (0.7 mi)	1.1 km (0.7 mi)
1163	Dimethylhydrazine, unsymmetrical	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.1 km (0.7 mi)	1.1 km (0.7 mi)
1182	Ethylchloroformate	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	60 m (200 ft)	0.6 km (0.4 mi)	1.4 km (0.9 mi)	1.4 km (0.9 mi)
1185	Ethyleneimine, inhibited	30 m (100 ft)	0.3 km (0.2 mi)	0.8 km (0.5 mi)	0.8 km (0.5 mi)	155 m (500 ft)	1.4 km (0.9 mi)	3.5 km (2.2 mi)	3.5 km (2.2 mi)
1238	Methylchloroformate	30 m (100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	1.1 km (0.7 mi)	155 m (500 ft)	1.6 km (1.0 mi)	3.4 km (2.1 mi)	3.4 km (2.1 mi)
1239	Methyl chloromethyl ether	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	0.6 km (0.4 mi)	125 m (400 ft)	1.1 km (0.7 mi)	2.7 km (1.7 mi)	2.7 km (1.7 mi)
1242	Methyldichlorosilane (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	1.6 km (1.0 mi)
1244	Methylhydrazine	30 m (100 ft)	0.3 km (0.2 mi)	0.8 km (0.5 mi)	0.8 km (0.5 mi)	125 m (400 ft)	1.1 km (0.7 mi)	2.7 km (1.7 mi)	2.7 km (1.7 mi)
1250	Methyltrichlorosilane (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	125 m (400 ft)	1.1 km (0.7 mi)	2.9 km (1.8 mi)	2.9 km (1.8 mi)
1251	Methyl vinyl ketone	155 m (500 ft)	1.3 km (0.8 mi)	3.4 km (2.1 mi)	3.4 km (2.1 mi)	915 m (3000 ft)	8.7 km (5.4 mi)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
1251	Methyl vinyl ketone, stabilized	155 m (500 ft)	1.3 km (0.8 mi)	3.4 km (2.1 mi)	3.4 km (2.1 mi)	915 m (3000 ft)	8.7 km (5.4 mi)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)

1259	Nickel carbonyl	60 m (200 ft)	0.6 km (0.4 mi)	2.1 km (1.3 mi)	215 m (700 ft)	2.1 km (1.3 mi)	4.3 km (2.7 mi)
1295	Trichlorosilane (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	125 m (400 ft)	1.3 km (0.8 mi)	3.2 km (2.0 mi)
1298	Trimethylchlorosilane (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	95 m (300 ft)	0.8 km (0.5 mi)	2.3 km (1.4 mi)
1340	Phosphorus pentasulfide, free from yellow or white Phosphorus (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	155 m (500 ft)	1.3 km (0.8 mi)	3.2 km (2.0 mi)
1340	Phosphorus pentasulphide, free from yellow or white Phosphorus (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	155 m (500 ft)	1.3 km (0.8 mi)	3.2 km (2.0 mi)
1360	Calcium phosphide (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.8 km (0.5 mi)	215 m (700 ft)	2.1 km (1.3 mi)	5.3 km (3.3 mi)
1380	Pentaborane	155 m (500 ft)	1.3 km (0.8 mi)	3.7 km (2.3 mi)	765 m (2500 ft)	6.6 km (4.1 mi)	10.6 km (6.6 mi)
1384	Sodium dithionite (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)
1384	Sodium hydrosulfite (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)
1384	Sodium hydrosulphite (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)
1397	Aluminum phosphide (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.8 km (0.5 mi)	245 m (800 ft)	2.4 km (1.5 mi)	6.4 km (4.0 mi)
1412	Lithium amide (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	95 m (300 ft)	0.8 km (0.5 mi)	1.9 km (1.2 mi)
1419	Magnesium aluminum phosphide (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.8 km (0.5 mi)	215 m (700 ft)	2.1 km (1.3 mi)	5.5 km (3.4 mi)
1432	Sodium phosphide (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	155 m (500 ft)	1.4 km (0.9 mi)	4.0 km (2.5 mi)
1433	Stannic phosphides (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.8 km (0.5 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.7 km (2.9 mi)
1510	Tetranitromethane	30 m (100 ft)	0.3 km (0.2 mi)	0.5 km (0.3 mi)	60 m (200 ft)	0.6 km (0.4 mi)	1.3 km (0.8 mi)

\*+ means distance can be larger in certain atmospheric conditions

# TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

ID No.	NAME OF MATERIAL	SMALL SPILLS (From a small package or small leak from a large package)				LARGE SPILLS (From a large package or from many small packages)			
		First ISOLATE in all Directions		Then PROTECT persons Downwind during-		First ISOLATE in all Directions		Then PROTECT persons Downwind during-	
		Meters (Feet)	Kilometers (Miles)	DAY Kilometers (Miles)	NIGHT Kilometers (Miles)	Meters (Feet)	Kilometers (Miles)	DAY Kilometers (Miles)	NIGHT Kilometers (Miles)
1541	Acetone cyanohydrin, stabilized (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	95 m (300 ft)	0.8 km (0.5 mi)	2.1 km (1.3 mi)	2.1 km (1.3 mi)
1556	MD (when used as a weapon)	30 m (100 ft)	0.3 km (0.2 mi)	0.8 km (0.5 mi)	0.8 km (0.5 mi)	125 m (400 ft)	1.3 km (0.8 mi)	3.5 km (2.2 mi)	3.5 km (2.2 mi)
1556	Methylchloroarsine	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.0 km (0.6 mi)	1.0 km (0.6 mi)
1556	PD (when used as a weapon)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	0.3 km (0.2 mi)
1560	Arsenic chloride	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	60 m (200 ft)	0.6 km (0.4 mi)	1.4 km (0.9 mi)	1.4 km (0.9 mi)
1560	Arsenic trichloride	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	60 m (200 ft)	0.6 km (0.4 mi)	1.4 km (0.9 mi)	1.4 km (0.9 mi)
1569	Bromoacetone	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	95 m (300 ft)	0.8 km (0.5 mi)	1.9 km (1.2 mi)	1.9 km (1.2 mi)
1580	Chloropicrin	60 m (200 ft)	0.5 km (0.3 mi)	1.3 km (0.8 mi)	1.3 km (0.8 mi)	185 m (600 ft)	1.8 km (1.1 mi)	4.0 km (2.5 mi)	4.0 km (2.5 mi)
1581	Chloropicrin and Methyl bromide mixture	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	0.5 km (0.3 mi)	125 m (400 ft)	1.3 km (0.8 mi)	3.1 km (1.9 mi)	3.1 km (1.9 mi)
1581	Methyl bromide and Chloropicrin mixtures	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	0.5 km (0.3 mi)	125 m (400 ft)	1.3 km (0.8 mi)	3.1 km (1.9 mi)	3.1 km (1.9 mi)
1581	Methyl bromide and more than 2% Chloropicrin mixture, liquid	30 m (100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	1.1 km (0.7 mi)	215 m (700 ft)	2.1 km (1.3 mi)	5.6 km (3.5 mi)	5.6 km (3.5 mi)
1582	Chloropicrin and Methyl chloride mixture	30 m (100 ft)	0.2 km (0.1 mi)	0.8 km (0.5 mi)	0.8 km (0.5 mi)	95 m (300 ft)	1.0 km (0.6 mi)	3.2 km (2.0 mi)	3.2 km (2.0 mi)
1582	Methyl chloride and Chloropicrin mixtures	30 m (100 ft)	0.2 km (0.1 mi)	0.8 km (0.5 mi)	0.8 km (0.5 mi)	95 m (300 ft)	1.0 km (0.6 mi)	3.2 km (2.0 mi)	3.2 km (2.0 mi)
1583	Chloropicrin, absorbed	60 m (200 ft)	0.5 km (0.3 mi)	1.3 km (0.8 mi)	1.3 km (0.8 mi)	185 m (600 ft)	1.8 km (1.1 mi)	4.0 km (2.5 mi)	4.0 km (2.5 mi)
1583	Chloropicrin mixture, n.o.s.	30 m (100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	1.1 km (0.7 mi)	215 m (700 ft)	2.1 km (1.3 mi)	5.6 km (3.5 mi)	5.6 km (3.5 mi)
1589	CK (when used as a weapon)	60 m (200 ft)	0.6 km (0.4 mi)	2.4 km (1.5 mi)	2.4 km (1.5 mi)	400 m (1300 ft)	4.0 km (2.5 mi)	8.0 km (5.0 mi)	8.0 km (5.0 mi)

1589	Cyanogen chloride, inhibited	60 m (200 ft)	0.5 km (0.3 mi)	1.8 km (1.1 mi)	275 m (900 ft)	2.7 km (1.7 mi)	6.8 km (4.2 mi)
1595	Dimethyl sulfate	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	0.6 km (0.4 mi)
1595	Dimethyl sulphate	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	0.6 km (0.4 mi)
1605	Ethylene dibromide	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	0.5 km (0.3 mi)
1612	Hexaethyl tetraphosphate and compressed gas mixture	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.4 km (0.9 mi)
1613	Hydrocyanic acid, aqueous solution, with not more than 20% Hydrogen cyanide (when "Inhalation Hazard" is on a package or shipping paper)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	125 m (400 ft)	0.5 km (0.3 mi)	1.3 km (0.8 mi)
1613	Hydrogen cyanide, aqueous solution, with not more than 20% Hydrogen cyanide (when "Inhalation Hazard" is on a package or shipping paper)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	125 m (400 ft)	0.5 km (0.3 mi)	1.3 km (0.8 mi)
1614	Hydrogen cyanide, anhydrous, stabilized (absorbed)	60 m (200 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	400 m (1300 ft)	1.3 km (0.8 mi)	3.4 km (2.1 mi)
1614	Hydrogen cyanide, stabilized (absorbed)	60 m (200 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	400 m (1300 ft)	1.3 km (0.8 mi)	3.4 km (2.1 mi)
1647	Ethylene dibromide and Methyl bromide mixture, liquid	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	0.5 km (0.3 mi)
1647	Methyl bromide and Ethylene dibromide mixture, liquid	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	0.5 km (0.3 mi)
1660	Nitric oxide	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	155 m (500 ft)	1.3 km (0.8 mi)	3.5 km (2.2 mi)
1660	Nitric oxide, compressed	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	155 m (500 ft)	1.3 km (0.8 mi)	3.5 km (2.2 mi)
1670	Perchloromethyl mercaptan	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.1 km (0.7 mi)
1680	Potassium cyanide (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	95 m (300 ft)	0.8 km (0.5 mi)	2.6 km (1.6 mi)
1689	Sodium cyanide (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	95 m (300 ft)	1.0 km (0.6 mi)	2.6 km (1.6 mi)
1694	CA (when used as a weapon)	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	155 m (500 ft)	1.6 km (1.0 mi)	4.2 km (2.6 mi)

\*+ means distance can be larger in certain atmospheric conditions

# TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

ID No.	NAME OF MATERIAL	SMALL SPILLS (From a small package or small leak from a large package)				LARGE SPILLS (From a large package or from many small packages)			
		First ISOLATE in all Directions		Then PROTECT persons Downwind during-		First ISOLATE in all Directions		Then PROTECT persons Downwind during-	
		Meters (Feet)	DAY Kilometers (Miles)	NIGHT Kilometers (Miles)	DAY Kilometers (Miles)	Meters (Feet)	DAY Kilometers (Miles)	NIGHT Kilometers (Miles)	
1695	Chloroacetone, stabilized	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	60 m (200 ft)	0.6 km (0.4 mi)	1.3 km (0.8 mi)		
1697	CN (when used as a weapon)	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	125 m (400 ft)	1.1 km (0.7 mi)	3.2 km (2.0 mi)		
1698	Adamsite (when used as a weapon)	60 m (200 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	185 m (600 ft)	2.3 km (1.4 mi)	5.1 km (3.2 mi)		
1698	DM (when used as a weapon)	60 m (200 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	185 m (600 ft)	2.3 km (1.4 mi)	5.1 km (3.2 mi)		
1703	Tetraethyl dithiopyrophosphate and gases, in solution	30 m (100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	365 m (1200 ft)	3.7 km (2.3 mi)	6.9 km (4.3 mi)		
1703	Tetraethyl dithiopyrophosphate and gases, mixtures	30 m (100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	365 m (1200 ft)	3.7 km (2.3 mi)	6.9 km (4.3 mi)		
1703	Tetraethyl dithiopyrophosphate and gases, mixtures, or in solution (LC50 more than 200 ppm but not more than 5000 ppm)	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	125 m (400 ft)	0.8 km (0.5 mi)	2.9 km (1.8 mi)		
1703	Tetraethyl dithiopyrophosphate and gases, mixtures, or in solution (LC50 not more than 200 ppm)	30 m (100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	365 m (1200 ft)	3.7 km (2.3 mi)	6.9 km (4.3 mi)		
1705	Tetraethyl pyrophosphate and compressed gas mixtures	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	400 m (1300 ft)	4.0 km (2.5 mi)	7.2 km (4.5 mi)		
1705	Tetraethyl pyrophosphate and compressed gas mixtures (LC50 more than 200 ppm but not more than 5000 ppm)	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	125 m (400 ft)	0.8 km (0.5 mi)	2.9 km (1.8 mi)		
1705	Tetraethyl pyrophosphate and compressed gas mixtures (LC50 not more than 200 ppm)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	400 m (1300 ft)	4.0 km (2.5 mi)	7.2 km (4.5 mi)		

1714	Zinc phosphide (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.8 km (0.5 mi)	185 m (600 ft)	1.8 km (1.1 mi)	5.1 km (3.2 mi)
1716	Acetyl bromide (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	95 m (300 ft)	0.8 km (0.5 mi)	2.3 km (1.4 mi)
1717	Acetyl chloride (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	95 m (300 ft)	1.0 km (0.6 mi)	2.7 km (1.7 mi)
1722	Allyl chloroformate	155 m (500 ft)	1.3 km (0.8 mi)	2.7 km (1.7 mi)	610 m (2000 ft)	6.1 km (3.8 mi)	10.8 km (6.7 mi)
1724	Allyl trichlorosilane, stabilized (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	125 m (400 ft)	1.0 km (0.6 mi)	2.9 km (1.8 mi)
1725	Aluminum bromide, anhydrous (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	95 m (300 ft)	1.0 km (0.6 mi)	2.7 km (1.7 mi)
1726	Aluminum chloride, anhydrous (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)
1728	Amyl trichlorosilane (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)
1732	Antimony pentafluoride (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	155 m (500 ft)	1.6 km (1.0 mi)	3.7 km (2.3 mi)
1736	Benzoyl chloride (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)
1741	Boron trichloride	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	60 m (200 ft)	0.6 km (0.4 mi)	1.6 km (1.0 mi)
1744	Bromine	60 m (200 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.0 km (2.5 mi)
1744	Bromine, solution						
1745	Bromine pentafluoride (when spilled on land)	60 m (200 ft)	0.5 km (0.3 mi)	1.3 km (0.8 mi)	245 m (800 ft)	2.3 km (1.4 mi)	5.0 km (3.1 mi)
1745	Bromine pentafluoride (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.8 km (0.5 mi)	215 m (700 ft)	1.9 km (1.2 mi)	4.2 km (2.6 mi)
1746	Bromine trifluoride (when spilled on land)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	60 m (200 ft)	0.3 km (0.2 mi)	0.8 km (0.5 mi)

\*+ means distance can be larger in certain atmospheric conditions

**TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES**

ID No.	NAME OF MATERIAL	SMALL SPILLS (From a small package or small leak from a large package)				LARGE SPILLS (From a large package or from many small packages)			
		First ISOLATE in all Directions Meters (Feet)	Then PROTECT persons Downwind during-		First ISOLATE in all Directions Meters (Feet)	Then PROTECT persons Downwind during-			
			DAY Kilometers (Miles)	NIGHT Kilometers (Miles)		DAY Kilometers (Miles)	NIGHT Kilometers (Miles)		
1746	Bromine trifluoride (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	2.1 km (1.3 mi)	5.5 km (3.4 mi)		
1747	Butyltrichlorosilane (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.8 km (1.1 mi)		
1749	Chlorine trifluoride	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	335 m (1100 ft)	3.4 km (2.1 mi)	7.7 km (4.8 mi)		
1752	Chloroacetylchloride (when spilled on land)	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	95 m (300 ft)	0.8 km (0.5 mi)	1.6 km (1.0 mi)		
1752	Chloroacetylchloride (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)		
1754	Chlorosulfonic acid (when spilled on land)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)		
1754	Chlorosulfonic acid (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.4 km (0.9 mi)		
1754	Chlorosulfonic acid and Sulfur trioxide mixture (when spilled on land)	60 m (200 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	305 m (1000 ft)	2.1 km (1.3 mi)	5.6 km (3.5 mi)		
1754	Chlorosulfonic acid and Sulfur trioxide mixture (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)		
1754	Chlorosulphonic acid (when spilled on land)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.4 km (0.9 mi)		



1754	Chlorosulphonic acid and Sulphur trioxide mixture (when spilled on land)	60 m (200 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	305 m (1000 ft)	2.1 km (1.3 mi)	5.6 km (3.5 mi)
1754	Chlorosulphonic acid and Sulphur trioxide mixture (when spilled in water)						
1754	Sulfur trioxide and Chlorosulfonic acid mixture (when spilled on land)						
1754	Sulfur trioxide and Chlorosulfonic acid mixture (when spilled in water)						
1754	Sulphur trioxide and Chlorosulphonic acid mixture (when spilled on land)						
1754	Sulphur trioxide and Chlorosulphonic acid mixture (when spilled in water)						
1758	Chromium oxychloride (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)
1777	Fluorosulfonic acid (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.4 km (0.9 mi)
1777	Fluorosulphonic acid (when spilled in water)						
1801	Octyltrichlorosilane (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	95 m (300 ft)	0.8 km (0.5 mi)	2.4 km (1.5 mi)
1806	Phosphorus pentachloride (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	125 m (400 ft)	1.0 km (0.6 mi)	2.9 km (1.8 mi)
1809	Phosphorus trichloride (when spilled on land)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	125 m (400 ft)	1.1 km (0.7 mi)	2.7 km (1.7 mi)
1809	Phosphorus trichloride (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	125 m (400 ft)	1.1 km (0.7 mi)	2.6 km (1.6 mi)
1810	Phosphorus oxychloride (when spilled on land)	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	95 m (300 ft)	0.8 km (0.5 mi)	1.8 km (1.1 mi)
1810	Phosphorus oxychloride (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	95 m (300 ft)	1.0 km (0.6 mi)	2.6 km (1.6 mi)

\*+ means distance can be larger in certain atmospheric conditions

# TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

ID No.	NAME OF MATERIAL	SMALL SPILLS (From a small package or small leak from a large package)				LARGE SPILLS (From a large package or from many small packages)				
		ISOLATE in all Directions		PROTECT persons Downwind during-		ISOLATE in all Directions		PROTECT persons Downwind during-		
		Meters (Feet)	DAY Kilometers (Miles)	NIGHT Kilometers (Miles)	Meters (Feet)	DAY Kilometers (Miles)	NIGHT Kilometers (Miles)	Meters (Feet)	DAY Kilometers (Miles)	NIGHT Kilometers (Miles)
1818	Silicon tetrachloride (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	125 m (400 ft)	1.3 km (0.8 mi)	3.4 km (2.1 mi)			
1828	Sulfur chlorides (when spilled on land)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.0 km (0.6 mi)			
1828	Sulfur chlorides (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.6 km (0.4 mi)	2.3 km (1.4 mi)			
1828	Sulphur chlorides (when spilled on land)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.0 km (0.6 mi)			
1828	Sulphur chlorides (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.6 km (0.4 mi)	2.3 km (1.4 mi)			
1829	Sulfur trioxide	60 m (200 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)						
1829	Sulfur trioxide, inhibited									
1829	Sulfur trioxide, stabilized									
1829	Sulfur trioxide, uninhibited									
1829	Sulphur trioxide									
1829	Sulphur trioxide, inhibited									
1829	Sulphur trioxide, stabilized									
1829	Sulphur trioxide, uninhibited									
1831	Oleum	60 m (200 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)						
1831	Oleum, with not less than 30% free Sulfur trioxide									
1831	Oleum, with not less than 30% free Sulphur trioxide									
1831	Sulfuric acid, fuming									
1831	Sulfuric acid, fuming, with not less than 30% free Sulfur trioxide									
1831	Sulphuric acid, fuming									
1831	Sulphuric acid, fuming, with not less than 30% free Sulphur trioxide									

1834	Sulfuryl chloride (when spilled on land)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	0.6 km (0.4 mi)
1834	Sulfuryl chloride (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	125 m (400 ft)	1.1 km (0.7 mi)	2.4 km (1.5 mi)
1834	Sulphuryl chloride (when spilled on land)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	0.6 km (0.4 mi)
1834	Sulphuryl chloride (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	125 m (400 ft)	1.1 km (0.7 mi)	2.4 km (1.5 mi)
1836	Thionyl chloride (when spilled on land)	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	0.5 km (0.3 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.1 km (0.7 mi)
1836	Thionyl chloride (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	1.0 km (0.6 mi)	1.0 km (0.6 mi)	335 m (1100 ft)	3.2 km (2.0 mi)	7.1 km (4.4 mi)
1838	Titanium tetrachloride (when spilled on land)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	0.8 km (0.5 mi)
1838	Titanium tetrachloride (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	125 m (400 ft)	1.1 km (0.7 mi)	2.9 km (1.8 mi)
1859	Silicon tetrafluoride	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	0.5 km (0.3 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)
1859	Silicon tetrafluoride, compressed	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	0.5 km (0.3 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)
1892	ED (when used as a weapon)	30 m (100 ft)	0.3 km (0.2 mi)	0.8 km (0.5 mi)	0.8 km (0.5 mi)	125 m (400 ft)	1.3 km (0.8 mi)	2.6 km (1.6 mi)
1892	Ethyl dichloroarsine	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.0 km (0.6 mi)
1898	Acetyl iodide (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.6 km (0.4 mi)	1.6 km (1.0 mi)
1911	Diborane	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	95 m (300 ft)	1.0 km (0.6 mi)	2.7 km (1.7 mi)
1911	Diborane, compressed	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	95 m (300 ft)	1.0 km (0.6 mi)	2.7 km (1.7 mi)
1923	Calcium dithionite (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)
1923	Calcium hydrosulfite (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)
1923	Calcium hydrosulphite (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)

\*+\* means distance can be larger in certain atmospheric conditions

# TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

ID No.	NAME OF MATERIAL	SMALL SPILLS (From a small package or small leak from a large package)				LARGE SPILLS (From a large package or from many small packages)			
		ISOLATE in all Directions		PROTECT persons Downwind during-		ISOLATE in all Directions		PROTECT persons Downwind during-	
		Meters (Feet)	Kilometers (Miles)	DAY Kilometers (Miles)	NIGHT Kilometers (Miles)	Meters (Feet)	Kilometers (Miles)	DAY Kilometers (Miles)	NIGHT Kilometers (Miles)
1939	Phosphorus oxybromide (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	95 m (300 ft)	0.6 km (0.4 mi)	1.9 km (1.2 mi)	
1939	Phosphorus oxybromide, solid (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	95 m (300 ft)	0.6 km (0.4 mi)	1.9 km (1.2 mi)	
1953	Compressed gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone A)	185 m (600 ft)	1.8 km (1.1 mi)	5.6 km (3.5 mi)	5.6 km (3.5 mi)	915 m (3000 ft)	10.8 km (6.7 mi)	11.0+ km (7.0+ mi)	
1953	Compressed gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	1.1 km (0.7 mi)	305 m (1000 ft)	3.1 km (1.9 mi)	7.7 km (4.8 mi)	
1953	Compressed gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.2 km (0.1 mi)	1.0 km (0.6 mi)	1.0 km (0.6 mi)	215 m (700 ft)	2.1 km (1.3 mi)	5.6 km (3.5 mi)	
1953	Compressed gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone D)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)	
1953	Compressed gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone A)	185 m (600 ft)	1.8 km (1.1 mi)	5.6 km (3.5 mi)	5.6 km (3.5 mi)	915 m (3000 ft)	10.8 km (6.7 mi)	11.0+ km (7.0+ mi)	
1953	Compressed gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	1.1 km (0.7 mi)	305 m (1000 ft)	3.1 km (1.9 mi)	7.7 km (4.8 mi)	
1953	Compressed gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.2 km (0.1 mi)	1.0 km (0.6 mi)	1.0 km (0.6 mi)	215 m (700 ft)	2.1 km (1.3 mi)	5.6 km (3.5 mi)	
1953	Compressed gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone D)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)	

1953	Compressed gas, poisonous, flammable, n.o.s.	185 m (600 ft)	1.8 km (1.1 mi)	5.6 km (3.5 mi)	915 m (3000 ft)	10.8 km (6.7 mi)	11.0+ km (7.0+ mi)
1953	Compressed gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone A)						
1953	Compressed gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	305 m (1000 ft)	3.1 km (1.9 mi)	7.7 km (4.8 mi)
1953	Compressed gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.2 km (0.1 mi)	1.0 km (0.6 mi)	215 m (700 ft)	2.1 km (1.3 mi)	5.6 km (3.5 mi)
1953	Compressed gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone D)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)
1953	Compressed gas, toxic, flammable, n.o.s.	185 m (600 ft)	1.8 km (1.1 mi)	5.6 km (3.5 mi)	915 m (3000 ft)	10.8 km (6.7 mi)	11.0+ km (7.0+ mi)
1953	Compressed gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	305 m (1000 ft)	3.1 km (1.9 mi)	7.7 km (4.8 mi)
1953	Compressed gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.2 km (0.1 mi)	1.0 km (0.6 mi)	215 m (700 ft)	2.1 km (1.3 mi)	5.6 km (3.5 mi)
1953	Compressed gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone D)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)
1953	Liquefied gas, flammable, poisonous, n.o.s.	185 m (600 ft)	1.8 km (1.1 mi)	5.6 km (3.5 mi)	915 m (3000 ft)	10.8 km (6.7 mi)	11.0+ km (7.0+ mi)
1953	Liquefied gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone A)						

\*+ means distance can be larger in certain atmospheric conditions

# TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

ID No.	NAME OF MATERIAL	SMALL SPILLS (From a small package or small leak from a large package)				LARGE SPILLS (From a large package or from many small packages)			
		First ISOLATE in all Directions		Then PROTECT persons Downwind during-		First ISOLATE in all Directions		Then PROTECT persons Downwind during-	
		Meters (Feet)	Kilometers (Miles)	DAY Kilometers (Miles)	NIGHT Kilometers (Miles)	Meters (Feet)	Kilometers (Miles)	DAY Kilometers (Miles)	NIGHT Kilometers (Miles)
1953	Liquefied gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	305 m (1000 ft)	3.1 km (1.9 mi)	3.1 km (1.9 mi)	7.7 km (4.8 mi)
1953	Liquefied gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	1.0 km (0.6 mi)	215 m (700 ft)	2.1 km (1.3 mi)	2.1 km (1.3 mi)	5.6 km (3.5 mi)
1953	Liquefied gas, flammable, poisonous, n.o.s. (Inhalation Hazard Zone D)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	1.6 km (1.0 mi)	4.3 km (2.7 mi)
1953	Liquefied gas, flammable, toxic, n.o.s.	185 m (600 ft)	1.8 km (1.1 mi)	1.8 km (1.1 mi)	5.6 km (3.5 mi)	915 m (3000 ft)	10.8 km (6.7 mi)	10.8 km (6.7 mi)	11.0+ km (7.0+ mi)
1953	Liquefied gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone A)	30 m (100 ft)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	305 m (1000 ft)	3.1 km (1.9 mi)	3.1 km (1.9 mi)	7.7 km (4.8 mi)
1953	Liquefied gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	1.0 km (0.6 mi)	215 m (700 ft)	2.1 km (1.3 mi)	2.1 km (1.3 mi)	5.6 km (3.5 mi)
1953	Liquefied gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	1.6 km (1.0 mi)	4.3 km (2.7 mi)
1953	Liquefied gas, flammable, toxic, n.o.s. (Inhalation Hazard Zone D)	185 m (600 ft)	1.8 km (1.1 mi)	1.8 km (1.1 mi)	5.6 km (3.5 mi)	915 m (3000 ft)	10.8 km (6.7 mi)	10.8 km (6.7 mi)	11.0+ km (7.0+ mi)
1955	Compressed gas, poisonous, n.o.s. (Inhalation Hazard Zone A)	430 m (1400 ft)	4.2 km (2.6 mi)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
1955	Compressed gas, poisonous, n.o.s. (Inhalation Hazard Zone B)	60 m (200 ft)	0.5 km (0.3 mi)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	430 m (1400 ft)	4.0 km (2.5 mi)	4.0 km (2.5 mi)	9.8 km (6.1 mi)

1955	Compressed gas, poisonous, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	215 m (700 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)
1955	Compressed gas, poisonous, n.o.s. (Inhalation Hazard Zone D)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)
1955	Compressed gas, toxic, n.o.s.	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
1955	Compressed gas, toxic, n.o.s. (Inhalation Hazard Zone A)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	430 m (1400 ft)	4.0 km (2.5 mi)	9.8 km (6.1 mi)
1955	Compressed gas, toxic, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	215 m (700 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)
1955	Compressed gas, toxic, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)
1955	Compressed gas, toxic, n.o.s. (Inhalation Hazard Zone D)	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
1955	Liquefied gas, poisonous, n.o.s. Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone A)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	430 m (1400 ft)	4.0 km (2.5 mi)	9.8 km (6.1 mi)
1955	Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	215 m (700 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)
1955	Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)
1955	Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone D)	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
1955	Liquefied gas, toxic, n.o.s. Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone A)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	430 m (1400 ft)	4.0 km (2.5 mi)	9.8 km (6.1 mi)
1955	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	215 m (700 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)
1955	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)
1955	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone D)	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)

"+" means distance can be larger in certain atmospheric conditions

# TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

ID No.	NAME OF MATERIAL	SMALL SPILLS (From a small package or small leak from a large package)				LARGE SPILLS (From a large package or from many small packages)				
		First ISOLATE in all Directions Meters (Feet)	Then PROTECT persons Downwind during-		First ISOLATE in all Directions Meters (Feet)	Then PROTECT persons Downwind during-		First ISOLATE in all Directions Meters (Feet)	Then PROTECT persons Downwind during-	
			DAY Kilometers (Miles)	NIGHT Kilometers (Miles)		DAY Kilometers (Miles)	NIGHT Kilometers (Miles)		DAY Kilometers (Miles)	NIGHT Kilometers (Miles)
1955	Methyl bromide and nonflammable, nonliquefied compressed gas mixture	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	95 m (300 ft)	0.5 km (0.3 mi)	1.4 km (0.9 mi)
1955	Organic phosphate compound mixed with compressed gas	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	400 m (1300 ft)	4.0 km (2.5 mi)	7.2 km (4.5 mi)
1955	Organic phosphate mixed with compressed gas	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	400 m (1300 ft)	4.0 km (2.5 mi)	7.2 km (4.5 mi)
1955	Organic phosphorus compound mixed with compressed gas	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	400 m (1300 ft)	4.0 km (2.5 mi)	7.2 km (4.5 mi)
1967	Insecticide gas, poisonous, n.o.s.	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	400 m (1300 ft)	4.0 km (2.5 mi)	7.2 km (4.5 mi)
1967	Insecticide gas, toxic, n.o.s.	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	400 m (1300 ft)	4.0 km (2.5 mi)	7.2 km (4.5 mi)
1967	Parathion and compressed gas mixture	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	95 m (300 ft)	1.0 km (0.6 mi)	3.2 km (2.0 mi)
1975	Dinitrogen tetroxide and Nitric oxide mixture	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	155 m (500 ft)	1.3 km (0.8 mi)	3.5 km (2.2 mi)
1975	Nitric oxide and Dinitrogen tetroxide mixture	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	155 m (500 ft)	1.3 km (0.8 mi)	3.5 km (2.2 mi)
1975	Nitric oxide and Nitrogen dioxide mixture	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	155 m (500 ft)	1.3 km (0.8 mi)	3.5 km (2.2 mi)
1975	Nitric oxide and Nitrogen tetroxide mixture	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	155 m (500 ft)	1.3 km (0.8 mi)	3.5 km (2.2 mi)
1975	Nitrogen dioxide and Nitric oxide mixture	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	155 m (500 ft)	1.3 km (0.8 mi)	3.5 km (2.2 mi)
1975	Nitrogen tetroxide and Nitric oxide mixture	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	155 m (500 ft)	1.3 km (0.8 mi)	3.5 km (2.2 mi)
1994	Iron pentacarbonyl	30 m (100 ft)	0.3 km (0.2 mi)	0.6 km (0.4 mi)	30 m (100 ft)	0.3 km (0.2 mi)	0.6 km (0.4 mi)	125 m (400 ft)	1.1 km (0.7 mi)	2.4 km (1.5 mi)
2004	Magnesium diamide (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.3 km (0.8 mi)



2011	Magnesium phosphide (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.8 km (0.5 mi)	245 m (800 ft)	2.3 km (1.4 mi)	6.0 km (3.7 mi)
2012	Potassium phosphide (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	155 m (500 ft)	1.3 km (0.8 mi)	4.0 km (2.5 mi)
2013	Strontium phosphide (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	155 m (500 ft)	1.3 km (0.8 mi)	3.7 km (2.3 mi)
2032	Nitric acid, fuming	95 m (300 ft)	0.3 km (0.2 mi)	0.5 km (0.3 mi)	400 m (1300 ft)	1.3 km (0.8 mi)	3.5 km (2.2 mi)
2032	Nitric acid, red fuming						
2186	Hydrogen chloride, refrigerated liquid	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)
2188	Arsine	60 m (200 ft)	0.5 km (0.3 mi)	2.1 km (1.3 mi)	335 m (1100 ft)	3.2 km (2.0 mi)	6.6 km (4.1 mi)
2188	SA (when used as a weapon)	60 m (200 ft)	0.8 km (0.5 mi)	2.4 km (1.5 mi)	400 m (1300 ft)	4.0 km (2.5 mi)	8.0 km (5.0 mi)
2189	Dichlorosilane	30 m (100 ft)	0.3 km (0.2 mi)	1.0 km (0.6 mi)	245 m (800 ft)	2.4 km (1.5 mi)	6.3 km (3.9 mi)
2190	Oxygen difluoride	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
2190	Oxygen difluoride, compressed						
2191	Sulfuryl fluoride	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	95 m (300 ft)	0.8 km (0.5 mi)	2.3 km (1.4 mi)
2191	Sulphuryl fluoride						
2192	Germane	30 m (100 ft)	0.2 km (0.1 mi)	0.8 km (0.5 mi)	275 m (900 ft)	2.7 km (1.7 mi)	6.6 km (4.1 mi)
2194	Selenium hexafluoride	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	245 m (800 ft)	2.3 km (1.4 mi)	6.0 km (3.7 mi)
2195	Tellurium hexafluoride	60 m (200 ft)	0.6 km (0.4 mi)	2.3 km (1.4 mi)	365 m (1200 ft)	3.5 km (2.2 mi)	7.6 km (4.7 mi)
2196	Tungsten hexafluoride	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	155 m (500 ft)	1.3 km (0.8 mi)	3.7 km (2.3 mi)
2197	Hydrogen iodide, anhydrous	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	95 m (300 ft)	0.8 km (0.5 mi)	2.6 km (1.6 mi)
2198	Phosphorus pentafluoride	30 m (100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	125 m (400 ft)	1.1 km (0.7 mi)	3.5 km (2.2 mi)
2198	Phosphorus pentafluoride, compressed						
2199	Phosphine	95 m (300 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	490 m (1600 ft)	1.8 km (1.1 mi)	5.5 km (3.4 mi)
2202	Hydrogen selenide, anhydrous	185 m (600 ft)	1.8 km (1.1 mi)	5.6 km (3.5 mi)	915 m (3000 ft)	10.8 km (6.7 mi)	11.0+ km (7.0+ mi)
2204	Carbonyl sulfide	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	215 m (700 ft)	1.9 km (1.2 mi)	5.6 km (3.5 mi)
2204	Carbonyl sulphide						

\*+ means distance can be larger in certain atmospheric conditions

# TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

ID No.	NAME OF MATERIAL	SMALL SPILLS (From a small package or small leak from a large package)				LARGE SPILLS (From a large package or from many small packages)			
		First ISOLATE in all Directions		Then PROTECT persons Downwind during-		First ISOLATE in all Directions		Then PROTECT persons Downwind during-	
		Meters (Feet)	Kilometers (Miles)	DAY Kilometers (Miles)	NIGHT Kilometers (Miles)	Meters (Feet)	Kilometers (Miles)	DAY Kilometers (Miles)	NIGHT Kilometers (Miles)
2232	Chloroacetaldehyde	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	60 m (200 ft)	0.6 km (0.4 mi)	1.6 km (1.0 mi)		
2232	2-Chloroethanal	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	95 m (300 ft)	1.0 km (0.6 mi)	2.4 km (1.5 mi)		
2334	Allylamine	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	0.6 km (0.4 mi)		
2337	Phenylmercaptan	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.1 km (0.7 mi)		
2382	1,2-Dimethylhydrazine	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	95 m (300 ft)	0.8 km (0.5 mi)	1.9 km (1.2 mi)		
2382	Dimethylhydrazine, symmetrical	30 m (100 ft)	0.2 km (0.1 mi)	1.1 km (0.7 mi)	125 m (400 ft)	1.0 km (0.6 mi)	3.1 km (1.9 mi)		
2407	Isopropylchloroformate	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	305 m (1000 ft)	2.9 km (1.8 mi)	6.9 km (4.3 mi)		
2417	Carbonyl fluoride	60 m (200 ft)	0.5 km (0.3 mi)	1.9 km (1.2 mi)	365 m (1200 ft)	3.7 km (2.3 mi)	8.5 km (5.3 mi)		
2417	Carbonyl fluoride, compressed	30 m (100 ft)	0.3 km (0.2 mi)	1.4 km (0.9 mi)	155 m (500 ft)	0.6 km (0.4 mi)	2.1 km (1.3 mi)		
2418	Sulfur tetrafluoride	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	0.8 km (0.5 mi)		
2418	Sulphur tetrafluoride	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.6 km (0.4 mi)	1.4 km (0.9 mi)		
2420	Hexafluoroacetone	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)		
2421	Nitrogen trioxide	60 m (200 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	0.8 km (0.5 mi)		
2438	Trimethylacetylchloride	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	0.8 km (0.5 mi)		
2442	Trichloroacetylchloride (when spilled on land)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	60 m (200 ft)	0.6 km (0.4 mi)	1.4 km (0.9 mi)		
2442	Trichloroacetylchloride (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)		
2474	Thiophosgene	60 m (200 ft)	0.6 km (0.4 mi)	1.8 km (1.1 mi)	275 m (900 ft)	2.6 km (1.6 mi)	5.0 km (3.1 mi)		
2477	Methylisothiocyanate	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.1 km (0.7 mi)		
2480	Methylisocyanate	95 m (300 ft)	0.8 km (0.5 mi)	2.7 km (1.7 mi)	490 m (1600 ft)	4.8 km (3.0 mi)	9.8 km (6.1 mi)		
2481	Ethylisocyanate	215 m (700 ft)	1.9 km (1.2 mi)	4.3 km (2.7 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)		

2482	n-Propyl isocyanate	125 m (400 ft)	1.1 km (0.7 mi)	2.4 km (1.5 mi)	765 m (2500 ft)	6.3 km (3.9 mi)	10.6 km (6.6 mi)
2483	Isopropylisocyanate	185 m (600 ft)	1.8 km (1.1 mi)	3.9 km (2.4 mi)	430 m (1400 ft)	4.2 km (2.6 mi)	7.4 km (4.6 mi)
2484	tert-Butylisocyanate	125 m (400 ft)	1.0 km (0.6 mi)	2.4 km (1.5 mi)	550 m (1800 ft)	5.3 km (3.3 mi)	10.3 km (6.4 mi)
2485	n-Butylisocyanate	95 m (300 ft)	0.8 km (0.5 mi)	1.6 km (1.0 mi)	335 m (1100 ft)	3.1 km (1.9 mi)	6.3 km (3.9 mi)
2486	Isobutylisocyanate	60 m (200 ft)	0.6 km (0.4 mi)	1.4 km (0.9 mi)	155 m (500 ft)	1.6 km (1.0 mi)	3.2 km (2.0 mi)
2487	Phenylisocyanate	30 m (100 ft)	0.3 km (0.2 mi)	0.8 km (0.5 mi)	155 m (500 ft)	1.3 km (0.8 mi)	2.6 km (1.6 mi)
2488	Cyclohexylisocyanate	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	95 m (300 ft)	0.8 km (0.5 mi)	1.4 km (0.9 mi)
2495	Iodine pentafluoride (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	125 m (400 ft)	1.1 km (0.7 mi)	3.1 km (1.9 mi)
2521	Diketene, inhibited	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	0.5 km (0.3 mi)
2534	Methylchlorosilane	30 m (100 ft)	0.2 km (0.1 mi)	1.0 km (0.6 mi)	215 m (700 ft)	2.1 km (1.3 mi)	5.6 km (3.5 mi)
2548	Chlorine pentafluoride	30 m (100 ft)	0.3 km (0.2 mi)	1.0 km (0.6 mi)	365 m (1200 ft)	3.7 km (2.3 mi)	8.7 km (5.4 mi)
2576	Phosphorus oxybromide, molten (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	95 m (300 ft)	0.6 km (0.4 mi)	1.9 km (1.2 mi)
2600	Carbon monoxide and Hydrogen mixture	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	125 m (400 ft)	0.6 km (0.4 mi)	1.8 km (1.1 mi)
2600	Carbon monoxide and Hydrogen mixture, compressed						
2600	Hydrogen and Carbon monoxide mixture						
2600	Hydrogen and Carbon monoxide mixture, compressed						
2605	Methoxymethylisocyanate	60 m (200 ft)	0.3 km (0.2 mi)	0.8 km (0.5 mi)	125 m (400 ft)	1.3 km (0.8 mi)	2.6 km (1.6 mi)
2606	Methyl orthosilicate	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	0.6 km (0.4 mi)
2644	Methyl iodide	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	60 m (200 ft)	0.3 km (0.2 mi)	1.0 km (0.6 mi)
2646	Hexachlorocyclopentadiene	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)
2668	Chloroacetonitrile	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	0.5 km (0.3 mi)
2676	Stibine	30 m (100 ft)	0.3 km (0.2 mi)	1.6 km (1.0 mi)	245 m (800 ft)	2.3 km (1.4 mi)	6.0 km (3.7 mi)

\*+ means distance can be larger in certain atmospheric conditions

# TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

ID No.	NAME OF MATERIAL	SMALL SPILLS (From a small package or small leak from a large package)				LARGE SPILLS (From a large package or from many small packages)			
		First ISOLATE in all Directions		Then PROTECT persons Downwind during-		First ISOLATE in all Directions		Then PROTECT persons Downwind during-	
		Meters (Feet)	Kilometers (Miles)	DAY Kilometers (Miles)	NIGHT Kilometers (Miles)	Meters (Feet)	Kilometers (Miles)	DAY Kilometers (Miles)	NIGHT Kilometers (Miles)
2691	Phosphorus pentabromide (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	95 m (300 ft)	0.8 km (0.5 mi)	2.4 km (1.5 mi)	
2692	Boron tribromide (when spilled on land)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	60 m (200 ft)	0.6 km (0.4 mi)	1.4 km (0.9 mi)	
2692	Boron tribromide (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.1 mi	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	
2740	n-Propylchloroformate	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	0.2 mi	60 m (200 ft)	0.5 km (0.3 mi)	1.4 km (0.9 mi)	
2742	sec-Butylchloroformate	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.1 mi	30 m (100 ft)	0.3 km (0.2 mi)	0.6 km (0.4 mi)	
2742	Isobutylchloroformate	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.1 mi	60 m (200 ft)	0.3 km (0.2 mi)	0.8 km (0.5 mi)	
2743	n-Butylchloroformate	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.1 mi	30 m (100 ft)	0.3 km (0.2 mi)	0.5 km (0.3 mi)	
2806	Lithium nitride (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.1 mi	95 m (300 ft)	0.8 km (0.5 mi)	2.1 km (1.3 mi)	
2810	Bis-(2-chloroethyl)ethylamine	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.1 mi	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	
2810	Bis-(2-chloroethyl)methylamine	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.1 mi	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	
2810	Bis-(2-chloroethyl)sulfide	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.1 mi	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	
2810	Bis-(2-chloroethyl) sulphide	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.1 mi	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	
2810	Buzz (when used as a weapon)	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	0.3 mi	60 m (200 ft)	0.5 km (0.3 mi)	1.9 km (1.2 mi)	
2810	BZ (when used as a weapon)	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	0.3 mi	60 m (200 ft)	0.5 km (0.3 mi)	1.9 km (1.2 mi)	
2810	CS (when used as a weapon)	60 m (200 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	0.7 mi	245 m (800 ft)	2.6 km (1.6 mi)	5.6 km (3.5 mi)	
2810	DC (when used as a weapon)	30 m (100 ft)	0.2 km (0.1 mi)	0.8 km (0.5 mi)	0.5 mi	245 m (800 ft)	2.3 km (1.4 mi)	5.3 km (3.3 mi)	
2810	O-Ethyl S-(2-diisopropylaminoethyl)methylphosphonothiolate	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.1 mi	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	

2810	Ethyl N,N-dimethylphosphoramidocyanidate	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.0 km (0.6 mi)
2810	GA (when used as a weapon)	30 m (100 ft)	0.3 km (0.2 mi)	0.6 km (0.4 mi)	0.6 km (0.4 mi)	155 m (500 ft)	1.6 km (1.0 mi)	3.1 km (1.9 mi)
2810	GB (when used as a weapon)	155 m (500 ft)	1.6 km (1.0 mi)	3.4 km (2.1 mi)	3.4 km (2.1 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
2810	GD (when used as a weapon)	95 m (300 ft)	0.8 km (0.5 mi)	1.8 km (1.1 mi)	1.8 km (1.1 mi)	765 m (2500 ft)	6.8 km (4.2 mi)	10.5 km (6.5 mi)
2810	GF (when used as a weapon)	30 m (100 ft)	0.3 km (0.2 mi)	0.6 km (0.4 mi)	0.6 km (0.4 mi)	245 m (800 ft)	2.3 km (1.4 mi)	5.1 km (3.2 mi)
2810	H (when used as a weapon)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.6 km (0.4 mi)	1.1 km (0.7 mi)
2810	HD (when used as a weapon)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.6 km (0.4 mi)	1.1 km (0.7 mi)
2810	HL (when used as a weapon)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	95 m (300 ft)	1.0 km (0.6 mi)	1.8 km (1.1 mi)
2810	HN-1 (when used as a weapon)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.6 km (0.4 mi)	1.3 km (0.8 mi)
2810	HN-2 (when used as a weapon)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.1 km (0.7 mi)
2810	HN-3 (when used as a weapon)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)
2810	Isopropyl methylphosphonofluoridate	125 m (400 ft)	1.3 km (0.8 mi)	2.3 km (1.4 mi)	2.3 km (1.4 mi)	550 m (1800 ft)	5.3 km (3.3 mi)	8.7 km (5.4 mi)
2810	L (Lewisite)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	95 m (300 ft)	1.0 km (0.6 mi)	1.8 km (1.1 mi)
2810	Lewisite (when used as a weapon)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)
2810	Mustard (when used as a weapon)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)
2810	Mustard/Lewisite (when used as a weapon)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	95 m (300 ft)	1.0 km (0.6 mi)	1.8 km (1.1 mi)
2810	Pinacetyl methylphosphonofluoridate	60 m (200 ft)	0.5 km (0.3 mi)	0.8 km (0.5 mi)	0.8 km (0.5 mi)	215 m (700 ft)	2.1 km (1.3 mi)	3.1 km (1.9 mi)
2810	Poisonous liquid, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)	215 m (700 ft)	1.9 km (1.2 mi)	4.3 km (2.7 mi)	4.3 km (2.7 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
2810	Poisonous liquid, n.o.s. (Inhalation Hazard Zone A)							

"+" means distance can be larger in certain atmospheric conditions

# TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

ID No.	NAME OF MATERIAL	SMALL SPILLS (From a small package or small leak from a large package)				LARGE SPILLS (From a large package or from many small packages)			
		First ISOLATE in all Directions Meters (Feet)	Then PROTECT persons Downwind during-		First ISOLATE in all Directions Meters (Feet)	Then PROTECT persons Downwind during-			
			DAY Kilometers (Miles)	NIGHT Kilometers (Miles)		DAY Kilometers (Miles)	NIGHT Kilometers (Miles)		
2810	Poisonous liquid, n.o.s. (Inhalation Hazard Zone B)	60 m (200 ft)	0.5 km (0.3 mi)	1.3 km (0.8 mi)	245 m (800 ft)	2.3 km (1.4 mi)	5.0 km (3.1 mi)		
2810	Poisonous liquid, organic, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)	215 m (700 ft)	1.9 km (1.2 mi)	4.3 km (2.7 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)		
2810	Poisonous liquid, organic, n.o.s. (Inhalation Hazard Zone A)								
2810	Poisonous liquid, organic, n.o.s. (Inhalation Hazard Zone B)	60 m (200 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.0 km (2.5 mi)		
2810	Sarin (when used as a weapon)	155 m (500 ft)	1.6 km (1.0 mi)	3.4 km (2.1 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)		
2810	Soman (when used as a weapon)	95 m (300 ft)	0.8 km (0.5 mi)	1.8 km (1.1 mi)	765 m (2500 ft)	6.8 km (4.2 mi)	10.5 km (6.5 mi)		
2810	Tabun (when used as a weapon)	30 m (100 ft)	0.3 km (0.2 mi)	0.6 km (0.4 mi)	155 m (500 ft)	1.6 km (1.0 mi)	3.1 km (1.9 mi)		
2810	Thickened GD (when used as a weapon)	95 m (300 ft)	0.8 km (0.5 mi)	1.8 km (1.1 mi)	765 m (2500 ft)	6.8 km (4.2 mi)	10.5 km (6.5 mi)		
2810	Toxic liquid, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)	215 m (700 ft)	1.9 km (1.2 mi)	4.3 km (2.7 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)		
2810	Toxic liquid, n.o.s. (Inhalation Hazard Zone B)	60 m (200 ft)	0.5 km (0.3 mi)	1.3 km (0.8 mi)	245 m (800 ft)	2.3 km (1.4 mi)	5.0 km (3.1 mi)		
2810	Toxic liquid, organic, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)	215 m (700 ft)	1.9 km (1.2 mi)	4.3 km (2.7 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)		
2810	Toxic liquid, organic, n.o.s. (Inhalation Hazard Zone A)								

2810	Toxic liquid, organic, n.o.s. (Inhalation Hazard Zone B)	60 m (200 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.0 km (2.5 mi)
2810	Tris-(2-chloroethyl)amine	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)
2810	VX <b>(when used as a weapon)</b>	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.6 km (0.4 mi)	1.0 km (0.6 mi)
2811	CX <b>(when used as a weapon)</b>	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	95 m (300 ft)	1.0 km (0.6 mi)	3.1 km (1.9 mi)
2826	Ethyl chloroethioformate	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.5 km (0.3 mi)	0.8 km (0.5 mi)
2845	Ethyl phosphonous dichloride, anhydrous	60 m (200 ft)	0.5 km (0.3 mi)	1.3 km (0.8 mi)	155 m (500 ft)	1.6 km (1.0 mi)	3.4 km (2.1 mi)
2845	Methyl phosphonous dichloride	60 m (200 ft)	0.5 km (0.3 mi)	1.3 km (0.8 mi)	245 m (800 ft)	2.3 km (1.4 mi)	5.0 km (3.1 mi)
2901	Bromine chloride	30 m (100 ft)	0.3 km (0.2 mi)	1.0 km (0.6 mi)	155 m (500 ft)	1.6 km (1.0 mi)	4.0 km (2.5 mi)
2927	Ethyl phosphonothioic dichloride, anhydrous	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)
2927	Ethyl phosphorodichloridate	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)
2927	Poisonous liquid, corrosive, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)	215 m (700 ft)	1.9 km (1.2 mi)	4.3 km (2.7 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
2927	Poisonous liquid, corrosive, n.o.s. (Inhalation Hazard Zone A)	60 m (200 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	245 m (800 ft)	1.6 km (1.0 mi)	5.0 km (2.5 mi)
2927	Toxic liquid, corrosive, organic, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)	215 m (700 ft)	1.9 km (1.2 mi)	4.3 km (2.7 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
2927	Toxic liquid, corrosive, organic, n.o.s. (Inhalation Hazard Zone A)	60 m (200 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	245 m (800 ft)	1.6 km (1.0 mi)	5.0 km (2.5 mi)
2927	Toxic liquid, corrosive, organic, n.o.s. (Inhalation Hazard Zone B)	60 m (200 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	245 m (800 ft)	1.6 km (1.0 mi)	5.0 km (2.5 mi)
2929	Poisonous liquid, flammable, n.o.s. (when "Inhalation	155 m (500 ft)	1.3 km (0.8 mi)	3.4 km (2.1 mi)	915 m (3000 ft)	8.7 km (5.4 mi)	11.0+ km (7.0+ mi)

"+" means distance can be larger in certain atmospheric conditions

# TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

ID No.	NAME OF MATERIAL	SMALL SPILLS (From a small package or small leak from a large package)				LARGE SPILLS (From a large package or from many small packages)			
		First ISOLATE in all Directions Meters (Feet)	Then PROTECT persons Downwind during-		First ISOLATE in all Directions Meters (Feet)	Then PROTECT persons Downwind during-			
			DAY Kilometers (Miles)	NIGHT Kilometers (Miles)		DAY Kilometers (Miles)	NIGHT Kilometers (Miles)		
2929	Hazard" is on a package or shipping paper) Poisonous liquid, flammable, n.o.s. (Inhalation Hazard Zone A)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	125 m (400 ft)	1.1 km (0.7 mi)	2.7 km (1.7 mi)		
2929	Poisonous liquid, flammable, n.o.s. (Inhalation Hazard Zone B)	155 m (500 ft)	1.3 km (0.8 mi)	3.4 km (2.1 mi)	915 m (3000 ft)	8.7 km (5.4 mi)	11.0+ km (7.0+ mi)		
2929	Poisonous liquid, flammable, organic, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	125 m (400 ft)	1.1 km (0.7 mi)	2.7 km (1.7 mi)		
2929	Poisonous liquid, flammable, organic, n.o.s. (Inhalation Hazard Zone A)	155 m (500 ft)	1.3 km (0.8 mi)	3.4 km (2.1 mi)	915 m (3000 ft)	8.7 km (5.4 mi)	11.0+ km (7.0+ mi)		
2929	Poisonous liquid, flammable, organic, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	125 m (400 ft)	1.1 km (0.7 mi)	2.7 km (1.7 mi)		
2929	Toxic liquid, flammable, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	125 m (400 ft)	1.1 km (0.7 mi)	2.7 km (1.7 mi)		
2929	Toxic liquid, flammable, n.o.s. (Inhalation Hazard Zone A)	155 m (500 ft)	1.3 km (0.8 mi)	3.4 km (2.1 mi)	915 m (3000 ft)	8.7 km (5.4 mi)	11.0+ km (7.0+ mi)		
2929	Toxic liquid, flammable, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	125 m (400 ft)	1.1 km (0.7 mi)	2.7 km (1.7 mi)		
2929	Toxic liquid, flammable, organic, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	125 m (400 ft)	1.1 km (0.7 mi)	2.7 km (1.7 mi)		
2929	Toxic liquid, flammable, organic, n.o.s. (Inhalation Hazard Zone A)	155 m (500 ft)	1.3 km (0.8 mi)	3.4 km (2.1 mi)	915 m (3000 ft)	8.7 km (5.4 mi)	11.0+ km (7.0+ mi)		



2929	Toxic liquid, flammable, organic, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	125 m (400 ft)	1.1 km (0.7 mi)	2.7 km (1.7 mi)
2977	Radioactive material, Uranium hexafluoride, fissile (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	95 m (300 ft)	1.0 km (0.6 mi)	3.1 km (1.9 mi)
2977	Uranium hexafluoride, fissile containing more than 1% Uranium-235 (when spilled in water)						
2978	Radioactive material, Uranium hexafluoride, non fissile or fissile-excepted (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	95 m (300 ft)	1.0 km (0.6 mi)	3.1 km (1.9 mi)
2978	Uranium hexafluoride, fissile-excepted (when spilled in water)						
2978	Uranium hexafluoride, low specific activity (when spilled in water)						
2978	Uranium hexafluoride, non-fissile (when spilled in water)						
2985	Chlorosilanes, flammable, corrosive, n.o.s. (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	125 m (400 ft)	1.1 km (0.7 mi)	2.9 km (1.8 mi)
2985	Chlorosilanes, n.o.s. (when spilled in water)						
2986	Chlorosilanes, corrosive, flammable, n.o.s. (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	125 m (400 ft)	1.1 km (0.7 mi)	2.9 km (1.8 mi)
2986	Chlorosilanes, n.o.s. (when spilled in water)						
2987	Chlorosilanes, corrosive, n.o.s. (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	125 m (400 ft)	1.1 km (0.7 mi)	2.9 km (1.8 mi)
2987	Chlorosilanes, n.o.s. (when spilled in water)						

\*+ means distance can be larger in certain atmospheric conditions

# TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

ID No.	NAME OF MATERIAL	SMALL SPILLS (From a small package or small leak from a large package)				LARGE SPILLS (From a large package or from many small packages)			
		First ISOLATE in all Directions		Then PROTECT persons Downwind during-		First ISOLATE in all Directions		Then PROTECT persons Downwind during-	
		Meters (Feet)	Kilometers (Miles)	DAY Kilometers (Miles)	NIGHT Kilometers (Miles)	Meters (Feet)	Kilometers (Miles)	DAY Kilometers (Miles)	NIGHT Kilometers (Miles)
2988	Chlorosilanes, n.o.s. (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	125 m (400 ft)	1.1 km (0.7 mi)	2.9 km (1.8 mi)		
2988	Chlorosilanes, water-reactive, flammable, corrosive, n.o.s. (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.1 km (0.7 mi)		
3023	2-Methyl-2-heptanethiol	30 m (100 ft)	0.2 km (0.1 mi)	0.8 km (0.5 mi)	215 m (700 ft)	1.9 km (1.2 mi)	5.3 km (3.3 mi)		
3023	tert-Octylmercaptan	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)		
3048	Aluminum phosphide pesticide (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)		
3049	Metal alkyl halides, n.o.s. (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)		
3049	Metal alkyl halides, water-reactive, n.o.s. (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)		
3049	Metal aryl halides, n.o.s. (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)		
3049	Metal aryl halides, water-reactive, n.o.s. (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)		
3052	Aluminum alkyl halides (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)		
3057	Trifluoroacetyl chloride	30 m (100 ft)	0.3 km (0.2 mi)	1.4 km (0.9 mi)	430 m (1400 ft)	4.0 km (2.5 mi)	8.5 km (5.3 mi)		
3079	Methacrylonitrile, inhibited	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	60 m (200 ft)	0.6 km (0.4 mi)	1.6 km (1.0 mi)		
3083	Perchloryl fluoride	30 m (100 ft)	0.2 km (0.1 mi)	1.0 km (0.6 mi)	215 m (700 ft)	2.3 km (1.4 mi)	5.6 km (3.5 mi)		

3122	Poisonous liquid, oxidizing, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)	155 m (500 ft)	1.3 km (0.8 mi)	3.4 km (2.1 mi)	915 m (3000 ft)	8.7 km (5.4 mi)	11.0+ km (7.0+ mi)
3122	Poisonous liquid, oxidizing, n.o.s. (Inhalation Hazard Zone A)						
3122	Poisonous liquid, oxidizing, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	125 m (400 ft)	1.1 km (0.7 mi)	2.7 km (1.7 mi)
3122	Toxic liquid, oxidizing, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)	155 m (500 ft)	1.3 km (0.8 mi)	3.4 km (2.1 mi)	915 m (3000 ft)	8.7 km (5.4 mi)	11.0+ km (7.0+ mi)
3122	Toxic liquid, oxidizing, n.o.s. (Inhalation Hazard Zone A)						
3122	Toxic liquid, oxidizing, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	125 m (400 ft)	1.1 km (0.7 mi)	2.7 km (1.7 mi)
3123	Poisonous liquid, water-reactive, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)	215 m (700 ft)	1.9 km (1.2 mi)	4.3 km (2.7 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
3123	Poisonous liquid, water-reactive, n.o.s. (Inhalation Hazard Zone A)						
3123	Poisonous liquid, water-reactive, n.o.s. (Inhalation Hazard Zone B)	60 m (200 ft)	0.5 km (0.3 mi)	1.3 km (0.8 mi)	245 m (800 ft)	2.3 km (1.4 mi)	5.0 km (3.1 mi)
3123	Poisonous liquid, which in contact with water emits flammable gases, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)	215 m (700 ft)	1.9 km (1.2 mi)	4.3 km (2.7 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
3123	Poisonous liquid, which in contact with water emits flammable gases, n.o.s. (Inhalation Hazard Zone A)						
3123	Poisonous liquid, which in contact with water emits flammable gases, n.o.s. (Inhalation Hazard Zone B)	60 m (200 ft)	0.5 km (0.3 mi)	1.3 km (0.8 mi)	245 m (800 ft)	2.3 km (1.4 mi)	5.0 km (3.1 mi)

\*+ means distance can be larger in certain atmospheric conditions

# TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

ID No.	NAME OF MATERIAL	SMALL SPILLS (From a small package or small leak from a large package)				LARGE SPILLS (From a large package or from many small packages)			
		First ISOLATE in all Directions Meters (Feet)	Then PROTECT persons Downwind during-		First ISOLATE in all Directions Meters (Feet)	Then PROTECT persons Downwind during-			
			DAY Kilometers (Miles)	NIGHT Kilometers (Miles)		DAY Kilometers (Miles)	NIGHT Kilometers (Miles)		
3123	Toxic liquid, water-reactive, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)	215 m (700 ft)	1.9 km (1.2 mi)	4.3 km (2.7 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)		
3123	Toxic liquid, water-reactive, n.o.s. (Inhalation Hazard Zone A)								
3123	Toxic liquid, water-reactive, n.o.s. (Inhalation Hazard Zone B)	60 m (200 ft)	0.5 km (0.3 mi)	1.3 km (0.8 mi)	245 m (800 ft)	2.3 km (1.4 mi)	5.0 km (3.1 mi)		
3123	Toxic liquid, which in contact with water emits flammable gases, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)	215 m (700 ft)	1.9 km (1.2 mi)	4.3 km (2.7 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)		
3123	Toxic liquid, which in contact with water emits flammable gases, n.o.s. (Inhalation Hazard Zone A)								
3123	Toxic liquid, which in contact with water emits flammable gases, n.o.s. (Inhalation Hazard Zone B)	60 m (200 ft)	0.5 km (0.3 mi)	1.3 km (0.8 mi)	245 m (800 ft)	2.3 km (1.4 mi)	5.0 km (3.1 mi)		
3160	Liquefied gas, poisonous, flammable, n.o.s.	185 m (600 ft)	1.8 km (1.1 mi)	5.6 km (3.5 mi)	915 m (3000 ft)	10.8 km (6.7 mi)	11.0+ km (7.0+ mi)		
3160	Liquefied gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone A)								
3160	Liquefied gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	305 m (1000 ft)	3.1 km (1.9 mi)	7.7 km (4.8 mi)		

3160	Liquefied gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.2 km (0.1 mi)	1.0 km (0.6 mi)	215 m (700 ft)	2.1 km (1.3 mi)	5.6 km (3.5 mi)
3160	Liquefied gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone D)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)
3160	Liquefied gas, toxic, flammable, n.o.s.	185 m (600 ft)	1.8 km (1.1 mi)	5.6 km (3.5 mi)	915 m (3000 ft)	10.8 km (6.7 mi)	11.0+ km (7.0+ mi)
3160	Liquefied gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone A)	30 m (100 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	305 m (1000 ft)	3.1 km (1.9 mi)	7.7 km (4.8 mi)
3160	Liquefied gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.2 km (0.1 mi)	1.0 km (0.6 mi)	215 m (700 ft)	2.1 km (1.3 mi)	5.6 km (3.5 mi)
3160	Liquefied gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)
3160	Liquefied gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone D)	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
3162	Liquefied gas, poisonous, n.o.s.	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	430 m (1400 ft)	4.0 km (2.5 mi)	9.8 km (6.1 mi)
3162	Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	215 m (700 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)
3162	Liquefied gas, poisonous, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)
3162	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone D)	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
3162	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone A)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	430 m (1400 ft)	4.0 km (2.5 mi)	9.8 km (6.1 mi)
3162	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	215 m (700 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)
3162	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	215 m (700 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)

\*+\* means distance can be larger in certain atmospheric conditions

# TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

ID No.	NAME OF MATERIAL	SMALL SPILLS (From a small package or small leak from a large package)				LARGE SPILLS (From a large package or from many small packages)			
		First ISOLATE in all Directions Meters (Feet)	Then PROTECT persons Downwind during-		First ISOLATE in all Directions Meters (Feet)	Then PROTECT persons Downwind during-			
			DAY Kilometers (Miles)	NIGHT Kilometers (Miles)		DAY Kilometers (Miles)	NIGHT Kilometers (Miles)		
3162	Liquefied gas, toxic, n.o.s. (Inhalation Hazard Zone D)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)		
3246	Methanesulfonylchloride	95 m (300 ft)	0.6 km (0.4 mi)	2.4 km (1.5 mi)	245 m (800 ft)	2.3 km (1.4 mi)	5.1 km (3.2 mi)		
3246	Methanesulphonylchloride								
3275	Nitriles, poisonous, flammable, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	60 m (200 ft)	0.6 km (0.4 mi)	1.6 km (1.0 mi)		
3275	Nitriles, toxic, flammable, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)								
3276	Nitriles, poisonous, n.o.s.	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	60 m (200 ft)	0.6 km (0.4 mi)	1.6 km (1.0 mi)		
3276	Nitriles, toxic, n.o.s.								
3278	Organophosphorus compound, poisonous, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)	60 m (200 ft)	0.5 km (0.3 mi)	1.3 km (0.8 mi)	245 m (800 ft)	2.3 km (1.4 mi)	5.0 km (3.1 mi)		
3278	Organophosphorus compound, toxic, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)								
3279	Organophosphorus compound, poisonous, flammable, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)	60 m (200 ft)	0.5 km (0.3 mi)	1.3 km (0.8 mi)	245 m (800 ft)	2.3 km (1.4 mi)	5.0 km (3.1 mi)		
3279	Organophosphorus compound, toxic, flammable, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)								

3280	Organoarsenic compound, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)	30 m (100 ft)	0.2 km (0.1 mi)	0.8 km (0.5 mi)	185 m (600 ft)	1.8 km (1.1 mi)	4.3 km (2.7 mi)
3281	Metal carbonyls, n.o.s.	60 m (200 ft)	0.6 km (0.4 mi)	2.1 km (1.3 mi)	215 m (700 ft)	2.1 km (1.3 mi)	4.3 km (2.7 mi)
3287	Poisonous liquid, inorganic, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)	155 m (500 ft)	1.3 km (0.8 mi)	3.7 km (2.3 mi)	765 m (2500 ft)	6.6 km (4.1 mi)	10.6 km (6.6 mi)
3287	Poisonous liquid, inorganic, n.o.s. (Inhalation Hazard Zone A)						
3287	Poisonous liquid, inorganic, n.o.s. (Inhalation Hazard Zone B)	60 m (200 ft)	0.5 km (0.3 mi)	1.3 km (0.8 mi)	245 m (800 ft)	2.3 km (1.4 mi)	5.0 km (3.1 mi)
3287	Toxic liquid, inorganic, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)	155 m (500 ft)	1.3 km (0.8 mi)	3.7 km (2.3 mi)	765 m (2500 ft)	6.6 km (4.1 mi)	10.6 km (6.6 mi)
3287	Toxic liquid, inorganic, n.o.s. (Inhalation Hazard Zone A)						
3287	Toxic liquid, inorganic, n.o.s. (Inhalation Hazard Zone B)	60 m (200 ft)	0.5 km (0.3 mi)	1.3 km (0.8 mi)	245 m (800 ft)	2.3 km (1.4 mi)	5.0 km (3.1 mi)
3289	Poisonous liquid, corrosive, inorganic, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)	95 m (300 ft)	0.6 km (0.4 mi)	1.8 km (1.1 mi)	400 m (1300 ft)	2.6 km (1.6 mi)	5.0 km (3.1 mi)
3289	Poisonous liquid, corrosive, inorganic, n.o.s. (Inhalation Hazard Zone A)						
3289	Poisonous liquid, corrosive, inorganic, n.o.s. (Inhalation Hazard Zone B)	60 m (200 ft)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.0 km (2.5 mi)
3289	Toxic liquid, corrosive, inorganic, n.o.s. (when "Inhalation Hazard" is on a package or shipping paper)	95 m (300 ft)	0.6 km (0.4 mi)	1.8 km (1.1 mi)	400 m (1300 ft)	2.6 km (1.6 mi)	5.0 km (3.1 mi)
3289	Toxic liquid, corrosive, inorganic, n.o.s. (Inhalation Hazard Zone A)						

\*+ means distance can be larger in certain atmospheric conditions

# TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

ID No.	NAME OF MATERIAL	SMALL SPILLS (From a small package or small leak from a large package)				LARGE SPILLS (From a large package or from many small packages)			
		First ISOLATE in all Directions		Then PROTECT persons Downwind during-		First ISOLATE in all Directions		Then PROTECT persons Downwind during-	
		Meters (Feet)	Kilometers (Miles)	DAY Kilometers (Miles)	NIGHT Kilometers (Miles)	Meters (Feet)	Kilometers (Miles)	DAY Kilometers (Miles)	NIGHT Kilometers (Miles)
3289	Toxic liquid, corrosive, inorganic, n.o.s. (Inhalation Hazard Zone B)	60 m (200 ft)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	1.1 km (0.7 mi)	185 m (600 ft)	1.6 km (1.0 mi)	1.6 km (1.0 mi)	4.0 km (2.5 mi)
3294	Hydrogen cyanide, solution in alcohol, with not more than 45% Hydrogen cyanide (when "Inhalation Hazard" is on a package or shipping paper)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.3 km (0.2 mi)	215 m (700 ft)	0.6 km (0.4 mi)	0.6 km (0.4 mi)	1.9 km (1.2 mi)
3300	Carbon dioxide and Ethylene oxide mixture, with more than 87% Ethylene oxide	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.5 km (0.3 mi)	0.5 km (0.3 mi)	1.8 km (1.1 mi)
3300	Ethylene oxide and Carbon dioxide mixture, with more than 87% Ethylene oxide	430 m (1400 ft)	4.2 km (2.6 mi)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
3303	Compressed gas, poisonous, oxidizing, n.o.s.	60 m (200 ft)	0.5 km (0.3 mi)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	335 m (1100 ft)	3.4 km (2.1 mi)	3.4 km (2.1 mi)	7.7 km (4.8 mi)
3303	Compressed gas, poisonous, oxidizing, n.o.s. (Inhalation Hazard Zone A)	30 m (100 ft)	0.3 km (0.2 mi)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	215 m (700 ft)	3.1 km (1.9 mi)	3.1 km (1.9 mi)	7.2 km (4.5 mi)
3303	Compressed gas, poisonous, oxidizing, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	1.6 km (1.0 mi)	4.3 km (2.7 mi)



3303	Compressed gas, toxic, oxidizing, n.o.s.	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
3303	Compressed gas, toxic, oxidizing, n.o.s. (Inhalation Hazard Zone A)						
3303	Compressed gas, toxic, oxidizing, n.o.s. (Inhalation Hazard Zone B)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	335 m (1100 ft)	3.4 km (2.1 mi)	7.7 km (4.8 mi)
3303	Compressed gas, toxic, oxidizing, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	215 m (700 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)
3303	Compressed gas, toxic, oxidizing, n.o.s. (Inhalation Hazard Zone D)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)
3304	Compressed gas, poisonous, corrosive, n.o.s.	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
3304	Compressed gas, poisonous, corrosive, n.o.s. (Inhalation Hazard Zone A)						
3304	Compressed gas, poisonous, corrosive, n.o.s. (Inhalation Hazard Zone B)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	430 m (1400 ft)	4.0 km (2.5 mi)	9.8 km (6.1 mi)
3304	Compressed gas, poisonous, corrosive, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	185 m (600 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)
3304	Compressed gas, poisonous, corrosive, n.o.s. (Inhalation Hazard Zone D)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)
3304	Compressed gas, toxic, corrosive, n.o.s.	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
3304	Compressed gas, toxic, corrosive, n.o.s. (Inhalation Hazard Zone A)						

\*+ means distance can be larger in certain atmospheric conditions

# TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

ID No.	NAME OF MATERIAL	SMALL SPILLS (From a small package or small leak from a large package)				LARGE SPILLS (From a large package or from many small packages)			
		First ISOLATE in all Directions Meters (Feet)	Then PROTECT persons Downwind during-		First ISOLATE in all Directions Meters (Feet)	Then PROTECT persons Downwind during-			
			DAY Kilometers (Miles)	NIGHT Kilometers (Miles)		DAY Kilometers (Miles)	NIGHT Kilometers (Miles)		
3304	Compressed gas, toxic, corrosive, n.o.s. (Inhalation Hazard Zone B)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	430 m (1400 ft)	4.0 km (2.5 mi)	9.8 km (6.1 mi)		
3304	Compressed gas, toxic, corrosive, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	185 m (600 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)		
3304	Compressed gas, toxic, corrosive, n.o.s. (Inhalation Hazard Zone D)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)		
3305	Compressed gas, poisonous, flammable, corrosive, n.o.s.	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)		
3305	Compressed gas, poisonous, flammable, corrosive, n.o.s. (Inhalation Hazard Zone A)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	430 m (1400 ft)	4.0 km (2.5 mi)	9.8 km (6.1 mi)		
3305	Compressed gas, poisonous, flammable, corrosive, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	185 m (600 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)		
3305	Compressed gas, poisonous, flammable, corrosive, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)		
3305	Compressed gas, toxic, flammable, corrosive, n.o.s. (Inhalation Hazard Zone D)	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)		
3305	Compressed gas, toxic, flammable, corrosive, n.o.s. (Inhalation Hazard Zone A)								

3305	Compressed gas, toxic, flammable, corrosive, n.o.s. (Inhalation Hazard Zone B)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	430 m (1400 ft)	4.0 km (2.5 mi)	9.8 km (6.1 mi)
3305	Compressed gas, toxic, flammable, corrosive, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	185 m (600 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)
3305	Compressed gas, toxic, flammable, corrosive, n.o.s. (Inhalation Hazard Zone D)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)
3306	Compressed gas, poisonous, oxidizing, corrosive, n.o.s.	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
3306	Compressed gas, poisonous, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone A)	330 m (1100 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	335 m (1100 ft)	3.4 km (2.1 mi)	7.7 km (4.8 mi)
3306	Compressed gas, poisonous, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	185 m (600 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)
3306	Compressed gas, poisonous, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)
3306	Compressed gas, toxic, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone D)	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
3306	Compressed gas, toxic, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone A)	330 m (1100 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	335 m (1100 ft)	3.4 km (2.1 mi)	7.7 km (4.8 mi)
3306	Compressed gas, toxic, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone B)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	185 m (600 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)
3306	Compressed gas, toxic, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	185 m (600 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)

"+" means distance can be larger in certain atmospheric conditions

# TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

ID No.	NAME OF MATERIAL	SMALL SPILLS (From a small package or small leak from a large package)				LARGE SPILLS (From a large package or from many small packages)			
		First ISOLATE in all Directions Meters (Feet)	Then PROTECT persons Downwind during-		First ISOLATE in all Directions Meters (Feet)	Then PROTECT persons Downwind during-			
			DAY Kilometers (Miles)	NIGHT Kilometers (Miles)		DAY Kilometers (Miles)	NIGHT Kilometers (Miles)		
3306	Compressed gas, toxic, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone D)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)		
3307	Liquefied gas, poisonous, oxidizing, n.o.s.	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)		
3307	Liquefied gas, poisonous, oxidizing, n.o.s. (Inhalation Hazard Zone A)	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)		
3307	Liquefied gas, poisonous, oxidizing, n.o.s. (Inhalation Hazard Zone B)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	335 m (1100 ft)	3.4 km (2.1 mi)	7.7 km (4.8 mi)		
3307	Liquefied gas, poisonous, oxidizing, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	215 m (700 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)		
3307	Liquefied gas, poisonous, oxidizing, n.o.s. (Inhalation Hazard Zone D)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)		
3307	Liquefied gas, toxic, oxidizing, n.o.s.	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)		
3307	Liquefied gas, toxic, oxidizing, n.o.s. (Inhalation Hazard Zone A)	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)		
3307	Liquefied gas, toxic, oxidizing, n.o.s. (Inhalation Hazard Zone B)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	335 m (1100 ft)	3.4 km (2.1 mi)	7.7 km (4.8 mi)		
3307	Liquefied gas, toxic, oxidizing, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	215 m (700 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)		
3307	Liquefied gas, toxic, oxidizing, n.o.s. (Inhalation Hazard Zone D)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)		

3308	Liquefied gas, poisonous, corrosive, n.o.s.	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
3308	Liquefied gas, poisonous, corrosive, n.o.s. (Inhalation Hazard Zone A)						
3308	Liquefied gas, poisonous, corrosive, n.o.s. (Inhalation Hazard Zone B)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	430 m (1400 ft)	4.0 km (2.5 mi)	9.8 km (6.1 mi)
3308	Liquefied gas, poisonous, corrosive, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	185 m (600 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)
3308	Liquefied gas, poisonous, corrosive, n.o.s. (Inhalation Hazard Zone D)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)
3308	Liquefied gas, toxic, corrosive, n.o.s.						
3308	Liquefied gas, toxic, corrosive, n.o.s. (Inhalation Hazard Zone A)	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
3308	Liquefied gas, toxic, corrosive, n.o.s. (Inhalation Hazard Zone B)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	430 m (1400 ft)	4.0 km (2.5 mi)	9.8 km (6.1 mi)
3308	Liquefied gas, toxic, corrosive, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	185 m (600 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)
3308	Liquefied gas, toxic, corrosive, n.o.s. (Inhalation Hazard Zone D)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)
3309	Liquefied gas, poisonous, flammable, corrosive, n.o.s.						
3309	Liquefied gas, poisonous, flammable, corrosive, n.o.s. (Inhalation Hazard Zone A)	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
3309	Liquefied gas, poisonous, flammable, corrosive, n.o.s. (Inhalation Hazard Zone B)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	430 m (1400 ft)	4.0 km (2.5 mi)	9.8 km (6.1 mi)
3309	Liquefied gas, poisonous, flammable, corrosive, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	185 m (600 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)

"+" means distance can be larger in certain atmospheric conditions

# TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

ID No.	NAME OF MATERIAL	SMALL SPILLS (From a small package or small leak from a large package)				LARGE SPILLS (From a large package or from many small packages)			
		First ISOLATE in all Directions Meters (Feet)	Then PROTECT persons Downwind during-		First ISOLATE in all Directions Meters (Feet)	Then PROTECT persons Downwind during-			
			DAY Kilometers (Miles)	NIGHT Kilometers (Miles)		DAY Kilometers (Miles)	NIGHT Kilometers (Miles)		
3309	Liquefied gas, poisonous, flammable, corrosive, n.o.s. (Inhalation Hazard Zone D)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)		
3309	Liquefied gas, toxic, flammable, corrosive, n.o.s.	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)		
3309	Liquefied gas, toxic, flammable, corrosive, n.o.s. (Inhalation Hazard Zone A)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	430 m (1400 ft)	4.0 km (2.5 mi)	9.8 km (6.1 mi)		
3309	Liquefied gas, toxic, flammable, corrosive, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	185 m (600 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)		
3309	Liquefied gas, toxic, flammable, corrosive, n.o.s. (Inhalation Hazard Zone D)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)		
3310	Liquefied gas, poisonous, oxidizing, corrosive, n.o.s.	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)		
3310	Liquefied gas, poisonous, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone A)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	335 m (1100 ft)	3.4 km (2.1 mi)	7.7 km (4.8 mi)		
3310	Liquefied gas, poisonous, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	185 m (600 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)		

3310	Liquefied gas, poisonous, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone D)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)
3310	Liquefied gas, toxic, oxidizing, corrosive, n.o.s.	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
3310	Liquefied gas, toxic, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone A)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	335 m (1100 ft)	3.4 km (2.1 mi)	7.7 km (4.8 mi)
3310	Liquefied gas, toxic, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	185 m (600 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)
3310	Liquefied gas, toxic, oxidizing, corrosive, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)
3318	Ammonia solution, with more than 50% Ammonia	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	60 m (200 ft)	0.5 km (0.3 mi)	1.1 km (0.7 mi)
3355	Insecticide gas, poisonous, flammable, n.o.s.	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)
3355	Insecticide gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone A)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	430 m (1400 ft)	4.0 km (2.5 mi)	9.8 km (6.1 mi)
3355	Insecticide gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	215 m (700 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)
3355	Insecticide gas, poisonous, flammable, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)

\*+ means distance can be larger in certain atmospheric conditions

# TABLE OF INITIAL ISOLATION AND PROTECTIVE ACTION DISTANCES

ID No.	NAME OF MATERIAL	SMALL SPILLS (From a small package or small leak from a large package)				LARGE SPILLS (From a large package or from many small packages)			
		First ISOLATE in all Directions		Then PROTECT persons Downwind during-		First ISOLATE in all Directions		Then PROTECT persons Downwind during-	
		Meters (Feet)	Kilometers (Miles)	DAY Kilometers (Miles)	NIGHT Kilometers (Miles)	Meters (Feet)	Kilometers (Miles)	DAY Kilometers (Miles)	NIGHT Kilometers (Miles)
3355	Insecticide gas, toxic, flammable, n.o.s.	430 m (1400 ft)	4.2 km (2.6 mi)	8.4 km (5.2 mi)	915 m (3000 ft)	11.0+ km (7.0+ mi)	11.0+ km (7.0+ mi)	7.0+ mi (7.0+ mi)	
3355	Insecticide gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone A)	60 m (200 ft)	0.5 km (0.3 mi)	1.6 km (1.0 mi)	430 m (1400 ft)	4.0 km (2.5 mi)	9.8 km (6.1 mi)		
3355	Insecticide gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone B)	30 m (100 ft)	0.3 km (0.2 mi)	1.3 km (0.8 mi)	215 m (700 ft)	3.1 km (1.9 mi)	7.2 km (4.5 mi)		
3355	Insecticide gas, toxic, flammable, n.o.s. (Inhalation Hazard Zone C)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)	185 m (600 ft)	1.6 km (1.0 mi)	4.3 km (2.7 mi)		
9191	Chlorine dioxide, hydrate, frozen (when spilled in water)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.2 km (0.1 mi)	0.6 km (0.4 mi)		
9192	Fluorine, refrigerated liquid (cryogenic liquid)	30 m (100 ft)	0.2 km (0.1 mi)	0.5 km (0.3 mi)	185 m (600 ft)	1.4 km (0.9 mi)	4.0 km (2.5 mi)		
9202	Carbon monoxide, refrigerated liquid (cryogenic liquid)	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	125 m (400 ft)	0.6 km (0.4 mi)	1.8 km (1.1 mi)		
9206	Methylphosphonicdichloride	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.2 km (0.1 mi)	0.3 km (0.2 mi)		
9263	Chloropivaloylchloride	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	0.5 km (0.3 mi)		
9264	3,5-Dichloro-2,4,6-trifluoropyridine	30 m (100 ft)	0.2 km (0.1 mi)	0.2 km (0.1 mi)	30 m (100 ft)	0.3 km (0.2 mi)	0.5 km (0.3 mi)		
9269	Trimethoxysilane	30 m (100 ft)	0.3 km (0.2 mi)	1.0 km (0.6 mi)	215 m (700 ft)	2.1 km (1.3 mi)	4.2 km (2.6 mi)		



See Next Page for Table of Water-Reactive Materials Which Produce Toxic Gases

"+" means distance can be larger in certain atmospheric conditions

# TABLE OF WATER-REACTIVE MATERIALS WHICH PRODUCE TOXIC GASES

## Materials Which Produce Large Amounts of Toxic-by-Inhalation (TIH) Gas(es) When Spilled in Water

ID No.	Guide No.	Name of Material	TIH Gas(es) Produced
1162	151	Dimethyldichlorosilane	HCl
1242	139	Methyldichlorosilane	HCl
1250	155	Methyltrichlorosilane	HCl
1295	139	Trichlorosilane	HCl
1298	155	Trimethylchlorosilane	HCl
1340	139	Phosphorus pentasulfide, free from yellow and white Phosphorus	H <sub>2</sub> S
1340	139	Phosphorus pentasulphide, free from yellow and white Phosphorus	H <sub>2</sub> S
1360	139	Calcium phosphide	PH <sub>3</sub>
1384	135	Sodium dithionite	H <sub>2</sub> S SO <sub>2</sub>
1384	135	Sodium hydrosulfite	H <sub>2</sub> S SO <sub>2</sub>
1384	135	Sodium hydrosulphite	H <sub>2</sub> S SO <sub>2</sub>
1397	139	Aluminum phosphide	PH <sub>3</sub>
1412	139	Lithium amide	NH <sub>3</sub>
1419	139	Magnesium aluminum phosphide	PH <sub>3</sub>
1432	139	Sodium phosphide	PH <sub>3</sub>
1433	139	Stannic phosphides	PH <sub>3</sub>
1541	155	Acetone cyanohydrin, stabilized	HCN
1680	157	Potassium cyanide	HCN
1689	157	Sodium cyanide	HCN
1714	139	Zinc phosphide	PH <sub>3</sub>
1716	156	Acetyl bromide	HBr
1717	132	Acetyl chloride	HCl
1724	155	Allyl trichlorosilane, stabilized	HCl
1725	137	Aluminum bromide, anhydrous	HBr

### Chemical Symbols for TIH Gases:

Br <sub>2</sub>	Bromine	HF	Hydrogen fluoride	PH <sub>3</sub>	Phosphine
Cl <sub>2</sub>	Chlorine	HI	Hydrogen iodide	SO <sub>2</sub>	Sulfur dioxide
HBr	Hydrogen bromide	H <sub>2</sub> S	Hydrogen sulfide	SO <sub>2</sub>	Sulphur dioxide
HCl	Hydrogen chloride	H <sub>2</sub> S	Hydrogen sulphide	SO <sub>3</sub>	Sulfur trioxide
HCN	Hydrogen cyanide	NH <sub>3</sub>	Ammonia	SO <sub>3</sub>	Sulphur trioxide

# TABLE OF WATER-REACTIVE MATERIALS WHICH PRODUCE TOXIC GASES

## Materials Which Produce Large Amounts of Toxic-by-Inhalation (TIH) Gas(es) When Spilled in Water

ID No.	Guide No.	Name of Material	TIH Gas(es) Produced		
1726	137	Aluminum chloride, anhydrous	HCl		
1728	155	Amyltrichlorosilane	HCl		
1732	157	Antimony pentafluoride	HF		
1736	137	Benzoyl chloride	HCl		
1745	144	Bromine pentafluoride	HF	HBr	Br <sub>2</sub>
1746	144	Bromine trifluoride	HF	HBr	Br <sub>2</sub>
1747	155	Butyltrichlorosilane	HCl		
1752	156	Chloroacetyl chloride	HCl		
1754	137	Chlorosulfonic acid	HCl		
1754	137	Chlorosulfonic acid and Sulfur trioxide mixture	HCl		
1754	137	Chlorosulphonic acid	HCl		
1754	137	Chlorosulphonic acid and Sulphur trioxide mixture	HCl		
1754	137	Sulfur trioxide and Chlorosulfonic acid	HCl		
1754	137	Sulphur trioxide and Chlorosulphonic acid	HCl		
1758	137	Chromium oxychloride	HCl		
1777	137	Fluorosulfonic acid	HF		
1777	137	Fluorosulphonic acid	HF		
1801	156	Octyltrichlorosilane	HCl		
1806	137	Phosphorus pentachloride	HCl		
1809	137	Phosphorus trichloride	HCl		
1810	137	Phosphorus oxychloride	HCl		
1818	157	Silicon tetrachloride	HCl		
1828	137	Sulfur chlorides	HCl	SO <sub>2</sub>	H <sub>2</sub> S
1828	137	Sulphur chlorides	HCl	SO <sub>2</sub>	H <sub>2</sub> S

### Chemical Symbols for TIH Gases:

Br <sub>2</sub>	Bromine	HF	Hydrogen fluoride	PH <sub>3</sub>	Phosphine
Cl <sub>2</sub>	Chlorine	HI	Hydrogen iodide	SO <sub>2</sub>	Sulfur dioxide
HBr	Hydrogen bromide	H <sub>2</sub> S	Hydrogen sulfide	SO <sub>2</sub>	Sulphur dioxide
HCl	Hydrogen chloride	H <sub>2</sub> S	Hydrogen sulphide	SO <sub>3</sub>	Sulfur trioxide
HCN	Hydrogen cyanide	NH <sub>3</sub>	Ammonia	SO <sub>3</sub>	Sulphur trioxide

Use this list only when material is spilled in water.

# TABLE OF WATER-REACTIVE MATERIALS WHICH PRODUCE TOXIC GASES

## Materials Which Produce Large Amounts of Toxic-by-Inhalation (TIH) Gas(es) When Spilled in Water

ID No.	Guide No.	Name of Material	TIH Gas(es) Produced	
1834	137	Sulfuryl chloride	HCl	SO <sub>3</sub>
1834	137	Sulphuryl chloride	HCl	SO <sub>3</sub>
1836	137	Thionyl chloride	HCl	SO <sub>2</sub>
1838	137	Titanium tetrachloride	HCl	
1898	156	Acetyl iodide	HI	
1923	135	Calcium dithionite	H <sub>2</sub> S	SO <sub>2</sub>
1923	135	Calcium hydrosulfite	H <sub>2</sub> S	SO <sub>2</sub>
1923	135	Calcium hydrosulphite	H <sub>2</sub> S	SO <sub>2</sub>
1939	137	Phosphorus oxybromide	HBr	
1939	137	Phosphorus oxybromide, solid	HBr	
2004	135	Magnesium diamide	NH <sub>3</sub>	
2011	139	Magnesium phosphide	PH <sub>3</sub>	
2012	139	Potassium phosphide	PH <sub>3</sub>	
2013	139	Strontium phosphide	PH <sub>3</sub>	
2442	156	Trichloroacetyl chloride	HCl	
2495	144	Iodine pentafluoride	HF	
2576	137	Phosphorus oxybromide, molten	HBr	
2691	137	Phosphorus pentabromide	HBr	
2692	157	Boron tribromide	HBr	
2806	138	Lithium nitride	NH <sub>3</sub>	
2977	166	Radioactive material, Uranium hexafluoride, fissile	HF	
2977	166	Uranium hexafluoride, fissile containing more than 1% Uranium-235	HF	
2978	166	Radioactive material, Uranium hexafluoride, non-fissile or fissile excepted	HF	

### Chemical Symbols for TIH Gases:

Br <sub>2</sub>	Bromine	HF	Hydrogen fluoride	PH <sub>3</sub>	Phosphine
Cl <sub>2</sub>	Chlorine	HI	Hydrogen iodide	SO <sub>2</sub>	Sulfur dioxide
HBr	Hydrogen bromide	H <sub>2</sub> S	Hydrogen sulfide	SO <sub>2</sub>	Sulphur dioxide
HCl	Hydrogen chloride	H <sub>2</sub> S	Hydrogen sulphide	SO <sub>3</sub>	Sulfur trioxide
HCN	Hydrogen cyanide	NH <sub>3</sub>	Ammonia	SO <sub>3</sub>	Sulphur trioxide

# TABLE OF WATER-REACTIVE MATERIALS WHICH PRODUCE TOXIC GASES

## Materials Which Produce Large Amounts of Toxic-by-Inhalation (TIH) Gas(es) When Spilled in Water

ID No.	Guide No.	Name of Material	TIH Gas(es) Produced
2978	166	Uranium hexafluoride, fissile excepted	HF
2978	166	Uranium hexafluoride, low specific activity	HF
2978	166	Uranium hexafluoride, non-fissile	HF
2985	155	Chlorosilanes, flammable, corrosive, n.o.s.	HCl
2985	155	Chlorosilanes, n.o.s.	HCl
2986	155	Chlorosilanes, corrosive, flammable, n.o.s.	HCl
2986	155	Chlorosilanes, n.o.s.	HCl
2987	156	Chlorosilanes, corrosive, n.o.s.	HCl
2987	156	Chlorosilanes, n.o.s.	HCl
2988	139	Chlorosilanes, n.o.s.	HCl
2988	139	Chlorosilanes, water-reactive, flammable, corrosive, n.o.s.	HCl
3048	157	Aluminum phosphide pesticide	PH <sub>3</sub>
3049	138	Metal alkyl halides, n.o.s.	HCl
3049	138	Metal alkyl halides, water-reactive, n.o.s.	HCl
3049	138	Metal aryl halides, n.o.s.	HCl
3049	138	Metal aryl halides, water-reactive, n.o.s.	HCl
3052	135	Aluminum alkyl halides	HCl
9191	143	Chlorine dioxide, hydrate, frozen	Cl <sub>2</sub>

### Chemical Symbols for TIH Gases:

Br <sub>2</sub>	Bromine	HF	Hydrogen fluoride	PH <sub>3</sub>	Phosphine
Cl <sub>2</sub>	Chlorine	HI	Hydrogen iodide	SO <sub>2</sub>	Sulfur dioxide
HBr	Hydrogen bromide	H <sub>2</sub> S	Hydrogen sulfide	SO <sub>2</sub>	Sulphur dioxide
HCl	Hydrogen chloride	H <sub>2</sub> S	Hydrogen sulphide	SO <sub>3</sub>	Sulfur trioxide
HCN	Hydrogen cyanide	NH <sub>3</sub>	Ammonia	SO <sub>3</sub>	Sulphur trioxide

Use this list only when material is spilled in water.

## PROTECTIVE CLOTHING

**Street Clothing and Work Uniforms.** These garments, such as uniforms worn by police and emergency medical services personnel, provide almost no protection from the harmful effects of dangerous goods.

**Structural Fire Fighters' Protective Clothing (SFPC).** This category of clothing, often called turnout or bunker gear, means the protective clothing normally worn by fire fighters during structural fire fighting operations. It includes a helmet, coat, pants, boots, gloves and a hood to cover parts of the head not protected by the helmet and facepiece. This clothing must be used with full-facepiece positive pressure self-contained breathing apparatus (SCBA). This protective clothing should, at a minimum, meet the OSHA Fire Brigades Standard (29 CFR 1910.156). Structural fire fighters' protective clothing provides limited protection from heat and cold, but may not provide adequate protection from the harmful vapors or liquids that are encountered during dangerous goods incidents. Each guide includes a statement about the use of SFPC in incidents involving those materials referenced by that guide. Some guides state that SFPC provides limited protection. In those cases, the responder wearing SFPC and SCBA may be able to perform an expedient, that is quick "in-and-out", operation. However, this type of operation can place the responder at risk of exposure, injury or death. The incident commander makes the decision to perform this operation only if an overriding benefit can be gained (i.e., perform an immediate rescue, turn off a valve to control a leak, etc.). The coverall-type protective clothing customarily worn to fight fires in forests or wildlands is not SFPC and is not recommended nor referred to elsewhere in this guidebook.

**Positive Pressure Self-Contained Breathing Apparatus (SCBA).** This apparatus provides a constant, positive pressure flow of air within the facepiece, even if one inhales deeply while doing heavy work. Use apparatus certified by NIOSH and the Department of Labor/Mine Safety and Health Administration in accordance with 42 CFR Part 84. Use it in accordance with the requirements for respiratory protection specified in OSHA 29 CFR 1910.134 (Respiratory Protection) and/or 29 CFR 1910.156 (f) (Fire Brigades Standard.) Chemical-cartridge respirators or other filtering masks are not acceptable substitutes for positive pressure self-contained breathing apparatus. Demand-type SCBA does not meet the OSHA 29 CFR 1910.156 (f)(1)(i) Fire Brigade Standard.

**Chemical Protective Clothing and Equipment.** Safe use of this type of protective clothing and equipment requires specific skills developed through training and experience. It is generally not available to, or used by, first responders. This type of special clothing may protect against one chemical, yet be readily permeated by chemicals for which it was not designed. Therefore, protective clothing should not be used unless it is compatible with the released material. This type of special clothing offers little or no protection against heat and/or cold. Examples of this type of equipment have been described as (1) Vapor Protective Suits (NFPA 1991), also known as Totally-Encapsulating Chemical Protective (TECP) Suits or Level A\* protection (OSHA 29 CFR 1910.120, Appendix A & B), and (2) Liquid-Splash Protective Suits (NFPA 1992 & 1993), also known as Level B\* or C\* protection (OSHA 29

CFR 1910.120, Appendix A & B). No single protective clothing material will protect you from all dangerous goods. Do not assume any protective clothing is resistant to cold and/or heat or flame exposure unless it is so certified by the manufacturer. (NFPA 1991 5-3 Flammability Resistance Test and 5-6 Cold Temperature Performance Test.)

\* Consult glossary for additional protection levels under the heading "Protective Clothing".

## FIRE AND SPILL CONTROL

### FIRE CONTROL

Water is the most common and generally most available fire extinguishing agent. Exercise caution in selecting a fire extinguishing method since there are many factors to be considered in an incident. Water may be ineffective in fighting fires involving some materials; its effectiveness depends greatly on the method of application.

Spill fires involving flammable liquids are generally controlled by applying a fire fighting foam to the surface of the burning material. Fighting flammable liquid fires requires foam concentrate which is chemically compatible with the burning material, correct mixing of the foam concentrate with water and air, and careful application and maintenance of the foam blanket. There are two general types of fire fighting foam: regular and alcohol-resistant. Examples of regular foam are protein-base, fluoroprotein, and aqueous film forming foam (AFFF). Some flammable liquids, including many petroleum products, can be controlled by applying regular foam. Other flammable liquids, including polar solvents (flammable liquids which are water soluble) such as alcohols and ketones, have different chemical properties. A fire involving these materials cannot be easily controlled with regular foam and requires application of alcohol-resistant foam. Polar-solvent fires may be difficult to control and require a higher foam application rate than other flammable liquid fires (see NFPA/ANSI Standards 11 and 11A for further information). Refer to the appropriate guide to determine which type of foam is recommended. Although it is impossible to make specific recommendations for flammable liquids which have subsidiary corrosive or toxic hazards, alcohol-resistant foam may be effective for many of these materials. The emergency response telephone number on the shipping document, or the appropriate emergency response agency, should be contacted as soon as possible for guidance on the proper fire extinguishing agent to use. The final selection of the agent and method depends on many factors such as incident location, exposure hazards, size of the fire, environmental concerns, as well as the availability of extinguishing agents and equipment at the scene.

### WATER REACTIVE MATERIALS

Water is sometimes used to flush spills and to reduce or direct vapors in spill situations. Some of the materials covered by the guidebook can react violently or even explosively with water. In these cases, consider letting the fire burn or leaving the spill alone (except to prevent its spreading by diking) until additional technical advice can be obtained. The applicable guides clearly warn you of these potentially dangerous reactions. These materials require technical advice since

- (1) water getting inside a ruptured or leaking container may cause an explosion;
- (2) water may be needed to cool adjoining containers to prevent their rupturing (exploding) or further spread of the fires;
- (3) water may be effective in mitigating an incident involving a water-reactive material only if it can be applied at a sufficient flooding rate for an extended period; and



- (4) the products from the reaction with water may be more toxic, corrosive, or otherwise more undesirable than the product of the fire without water applied.

When responding to an incident involving water-reactive chemicals, take into account the existing conditions such as wind, precipitation, location and accessibility to the incident, as well as the availability of the agents to control the fire or spill. Because there are variables to consider, the decision to use water on fires or spills involving water-reactive materials should be based on information from an authoritative source; for example, a producer of the material, who can be contacted through the emergency response telephone number or the appropriate emergency response agency.

## VAPOR CONTROL

Limiting the amount of vapor released from a pool of flammable or corrosive liquids is an operational concern. It requires the use of proper protective clothing, specialized equipment, appropriate chemical agents, and skilled personnel. Before engaging in vapor control, get advice from an authoritative source as to the proper tactics.

There are several ways to minimize the amount of vapors escaping from pools of spilled liquids, such as special foams, adsorbing agents, absorbing agents, and neutralizing agents. To be effective, these vapor control methods must be selected for the specific material involved and performed in a manner that will mitigate, not worsen, the incident.

Where specific materials are known, such as at manufacturing or storage facilities, it is desirable for the dangerous goods response team to prearrange with the facility operators to select and stockpile these control agents in advance of a spill. In the field, first responders may not have the most effective vapor control agent for the material available. They are likely to have only water and only one type of fire fighting foam on their vehicles. If the available foam is inappropriate for use, they are likely to use water spray. Because the water is being used to form a vapor seal, care must be taken not to churn or further spread the spill during application. Vapors that do not react with water may be directed away from the site using the air currents surrounding the water spray. Before using water spray or other methods to safely control vapor emission or to suppress ignition, obtain technical advice, based on specific chemical name identification.

## CRIMINAL/TERRORIST USE OF CHEMICAL/BIOLOGICAL AGENTS

The following is intended to supply information to first responders for use in making a preliminary assessment of a situation that they suspect involves criminal/terrorist use of chemical and/or biological (CB) agents. To aid in the assessment, a list of observable indicators of the use and/or presence of a CB agent is provided in the following paragraphs.

### **DIFFERENCES BETWEEN A CHEMICAL AND A BIOLOGICAL AGENT**

Chemical and biological agents can be dispersed in the air we breathe, the water we drink, or on surfaces we physically contact. Dispersion methods may be as simple as opening a container, using conventional (garden) spray devices, or as elaborate as detonating an improvised explosive device.

**Chemical Incidents** are characterized by the rapid onset of medical symptoms (minutes to hours) and easily observed signatures (colored residue, dead foliage, pungent odor, dead insects and animals).

**Biological Incidents** are characterized by the onset of symptoms in hours to days. Typically, there will be no characteristic signatures because biological agents are usually odorless and colorless. Because of the delayed onset of symptoms in a biological incident, the area affected may be greater due to the movement of infected individuals.

### **INDICATORS OF A POSSIBLE CHEMICAL INCIDENT**

<b>Dead animals/birds/fish</b>	Not just an occasional road kill, but numerous animals (wild and domestic, small and large), birds, and fish in the same area.
<b>Lack of insect life</b>	If normal insect activity (ground, air, and/or water) is missing, check the ground/water surface/shore line for dead insects. If near water, check for dead fish/aquatic birds.
<b>Unexplained odors</b>	Smells may range from fruity to flowery to sharp/pungent to garlic/ horseradish-like to bitter almonds/peach kernels to new mown hay. It is important to note that the particular odor is completely out of character with its surroundings.
<b>Unusual numbers of dying or sick people (mass casualties)</b>	Health problems including nausea, disorientation, difficulty in breathing, convulsions, localized sweating, conjunctivitis (reddening of eyes/nerve agent symptoms), erythema (reddening of skin/vesicant symptoms) and death.
<b>Pattern of casualties</b>	Casualties will likely be distributed downwind, or if indoors, by the air ventilation system.

## INDICATORS OF A POSSIBLE CHEMICAL INCIDENT (Continued)

<b>Blisters/rashes</b>	Numerous individuals experiencing unexplained water-like blisters, weals (like bee stings), and/or rashes.
<b>Illness in confined area</b>	Different casualty rates for people working indoors versus outdoors dependent on where the agent was released.
<b>Unusual liquid droplets</b>	Numerous surfaces exhibit oily droplets/film; numerous water surfaces have an oily film. (No recent rain.)
<b>Different looking areas</b>	Not just a patch of dead weeds, but trees, shrubs, bushes, food crops, and/or lawns that are dead, discolored, or withered. (No current drought.)
<b>Low-lying clouds</b>	Low-lying cloud/fog-like condition that is not consistent with its surroundings.
<b>Unusual metal debris</b>	Unexplained bomb/munitions-like material, especially if it contains a liquid.

## INDICATORS OF A POSSIBLE BIOLOGICAL INCIDENT

<b>Unusual numbers of sick or dying people or animals</b>	Any number of symptoms may occur. Casualties may occur hours to days after an incident has occurred. The time required before symptoms are observed is dependent on the agent used.
<b>Unscheduled and unusual spray being disseminated</b>	Especially if outdoors during periods of darkness.
<b>Abandoned spray devices</b>	Devices may not have distinct odors.

## PERSONAL SAFETY CONSIDERATIONS

When approaching a scene that may involve CB agents, the most critical consideration is the safety of oneself and other responders. Protective clothing and respiratory protection of appropriate level of safety must be used. Be aware that the presence and identification of CB agents may not be verifiable, especially in the case of biological agents. The following actions/measures to be considered are applicable to either a chemical or biological incident. The guidance is general in nature, not all encompassing, and its applicability should be evaluated on a case-by-case basis.

**Approach and response strategies.** Protect yourself and use a safe approach (minimize any exposure time, maximize the distance between you and the item that is likely to harm you, use cover as protection and wear appropriate personal protective equipment and

respiratory protection). Identify and estimate the hazard by using indicators as provided above. Isolate the area and secure the scene; potentially contaminated people should be isolated and decontaminated as soon as possible. In the event of a chemical incident, the fading of chemical odors is not necessarily an indication of reduced vapor concentrations. Some chemicals deaden the senses giving the false perception that the chemical is no longer present.

**Decontamination measures.** Emergency responders should follow standard decontamination procedures (flush-strip-flush). Mass casualty decontamination should begin as soon as possible by stripping (all clothing) and flushing (soap and water). If biological agents are involved or suspected, careful washing and use of a brush are more effective. If chemical agents are suspected, the most important and effective decontamination will be that done within the first one or two minutes. If possible, further decontamination should be performed using a 0.5% hypochlorite solution (1 part household bleach mixed with 9 parts water). If biological agents are suspected, a contact time of 10 to 15 minutes should be allowed before rinsing. The solution can be used on soft tissue wounds, but must not be used in eyes or open wounds of the abdomen, chest, brain, or spine. For further information contact the agencies listed in this guidebook.

**NOTE:** The above information was developed by the Department of National Defence (Canada) and the U.S. Department of the Army, Edgewood Arsenal.

## Glossary

Alcohol resistant foam	A foam that is resistant to “polar” chemicals such as ketones and esters which may break down other types of foam.
Biological agents	Living organisms that cause disease, sickness and mortality in humans. Anthrax and Ebola are examples of biological agents. <b>Refer to Guide 158.</b>
Blister agents (vesicants)	Substances that cause blistering of the skin. Exposure is through liquid or vapor contact with any exposed tissue (eyes, skin, lungs). Mustard (H), Distilled Mustard (HD), Nitrogen Mustard (HN) and Lewisite (L) are blister agents. <b>Symptoms:</b> Red eyes, skin irritation, burning of skin, blisters, upper respiratory damage, cough, hoarseness.
Blood agents	Substances that injure a person by interfering with cell respiration (the exchange of oxygen and carbon dioxide between blood and tissues). Hydrogen cyanide (AC) and Cyanogen chloride (CK) are blood agents. <b>Symptoms:</b> Respiratory distress, headache, unresponsiveness, seizures, coma.
Burn	Refers to either a chemical or thermal burn, the former may be caused by corrosive substances and the latter by liquefied cryogenic gases, hot molten substances, or flames.
Choking agents	Substances that cause physical injury to the lungs. Exposure is through inhalation. In extreme cases, membranes swell and lungs become filled with liquid (pulmonary edema). Death results from lack of oxygen; hence, the victim is “choked”. Phosgene (CG) is a choking agent. <b>Symptoms:</b> irritation to eyes/nose/throat, respiratory distress, nausea and vomiting, burning of exposed skin.
CO <sub>2</sub>	Carbon dioxide gas.
Cold zone	Area where the command post and support functions that are necessary to control the incident are located. This is also referred to as the clean zone, green zone or support zone in other documents. (EPA Standard Operating Safety Guidelines, OSHA 29 CFR 1910.120, NFPA 472)

## Glossary

- Combustible liquid      Liquids which have a flash point greater than 60.5°C (141°F) and below 93°C (200°F). U.S. regulations permit a flammable liquid with a flash point between 38°C (100°F) and 60.5°C (141°F) to be reclassified as a combustible liquid.
- Compatibility Group      Letters identify explosives that are deemed to be compatible. Class 1 materials are considered to be "compatible" if they can be transported together without significantly increasing either the probability of an incident or, for a given quantity, the magnitude of the effects of such an incident.
- A      Substances which are expected to mass detonate very soon after fire reaches them.
  - B      Articles which are expected to mass detonate very soon after fire reaches them.
  - C      Substances or articles which may be readily ignited and burn violently without necessarily exploding.
  - D      Substances or articles which may mass detonate (with blast and/or fragment hazard) when exposed to fire.
  - E&F      Articles which may mass detonate in a fire.
  - G      Substances and articles which may mass explode and give off smoke or toxic gases.
  - H      Articles which in a fire may eject hazardous projectiles and dense white smoke.
  - J      Articles which may mass explode.
  - K      Articles which in a fire may eject hazardous projectiles and toxic gases.
  - L      Substances and articles which present a special risk and could be activated by exposure to air or water.
  - N      Articles which contain only extremely insensitive detonating substances and demonstrate a negligible probability of accidental ignition or propagation.
  - S      Packaged substances or articles which, if accidentally initiated, produce effects that are usually confined to the immediate vicinity.

## Glossary

Control zones	Designated areas at dangerous goods incidents, based on safety and the degree of hazard. Many terms are used to describe control zones; however, in this guidebook, these zones are defined as the hot/exclusion/restricted zone, warm/contamination reduction/limited access zone, and cold/support/clean zone. (EPA Standard Operating Safety Guidelines, OSHA 29 CFR 1910.120, NFPA 472)
Cryogenic liquid	A refrigerated, liquefied gas that has a boiling point colder than -90°C (-130°F) at atmospheric pressure.
Dangerous Water Reactive Material	Produces significant toxic gas when it comes in contact with water.
Decomposition products	Products of a chemical or thermal break-down of a substance.
Decontamination	The removal of dangerous goods from personnel and equipment to the extent necessary to prevent potential adverse health effects. Always avoid direct or indirect contact with dangerous goods; however, if contact occurs, personnel should be decontaminated as soon as possible. Since the methods used to decontaminate personnel and equipment differ from one chemical to another, contact the chemical manufacturer, through the agencies listed on the inside back cover, to determine the appropriate procedure. Contaminated clothing and equipment should be removed after use and stored in a controlled area (warm/contamination reduction/limited access zone) until cleanup procedures can be initiated. In some cases, protective clothing and equipment cannot be decontaminated and must be disposed of in a proper manner.
Dry chemical	A preparation designed for fighting fires involving flammable liquids, pyrophoric substances and electrical equipment. Common types contain sodium bicarbonate or potassium bicarbonate.
Edema	The accumulation of an excessive amount of watery fluid in cells and tissues. Pulmonary edema is an excessive buildup of water in the lungs, for instance, after inhalation of a gas that is corrosive to lung tissue.
Flammable liquid	A liquid that has a flash point of 60.5°C (141°F) or lower.
Flash point	Lowest temperature at which a liquid or solid gives off vapor in such a concentration that, when the vapor combines with air near the surface of the liquid or solid, a flammable mixture is formed. Hence, the lower the flash point, the more flammable the material.

## Glossary

Hazard zones (Inhalation Hazard Zones)	<b>HAZARD ZONE A:</b> LC50 of less than or equal to 200 ppm, <b>HAZARD ZONE B:</b> LC50 greater than 200 ppm and less than or equal to 1000 ppm, <b>HAZARD ZONE C:</b> LC50 greater than 1000 ppm and less than or equal to 3000 ppm, <b>HAZARD ZONE D:</b> LC50 greater than 3000 ppm and less than or equal to 5000 ppm.
Hot zone	Area immediately surrounding a dangerous goods incident which extends far enough to prevent adverse effects from released dangerous goods to personnel outside the zone. This zone is also referred to as exclusion zone, red zone or restricted zone in other documents. (EPA Standard Operating Safety Guidelines, OSHA 29 CFR 1910.120, NFPA 472)
Immiscible	In this guidebook, means that a material does not mix readily with water.
Mass explosion	Explosion which affects almost the entire load virtually instantaneously.
Miscible	In this guidebook, means that a material mixes readily with water.
Nerve agents	Substances that interfere with the central nervous system. Exposure is primarily through contact with the liquid (via skin and eyes) and secondarily through inhalation of the vapor. Tabun (GA), Sarin (GB), Soman (GD) and VX are nerve agents. <b>Symptoms:</b> Pinpoint pupils, extreme headache, severe tightness in the chest, dyspnea, runny nose, coughing, salivation, unresponsiveness, seizures.
Non-polar	See "Immiscible".
n.o.s.	These letters refer to not otherwise specified. The entries which use this description are generic names such as "Corrosive liquid, n.o.s." This means that the actual chemical name for that corrosive liquid is not listed in the regulations; therefore, a generic name must be used to describe it on shipping papers.
Noxious	In this guidebook, means that a material may be harmful or injurious to health or physical well-being.
Oxidizer	A chemical which supplies its own oxygen and which helps other combustible material burn more readily.



## Glossary

P	The letter "P" following a guide number in the yellow-bordered and blue-bordered pages identifies a material which may polymerize violently under high temperature conditions or contamination with other products. This polymerization will produce heat and high pressure buildup in containers which may explode or rupture. (See polymerization below.)
pH	pH is a value that represents the acidity or alkalinity of a water solution. Pure water has a pH of 7. A pH value below 7 indicates an acid solution (a pH of 1 is extremely acidic). A pH above 7 indicates an alkaline solution (a pH of 14 is extremely alkaline). Acids and alkalies (bases) are commonly referred to as corrosive materials.
PIH	Poison Inhalation Hazard. Term used to describe gases and volatile liquids that are toxic when inhaled. (Same as TIH)
Polar	See "Miscible".
Polymerization	This term describes a chemical reaction which is generally associated with the production of plastic substances. Basically, the individual molecules of the chemical (liquid or gas) react with each other to produce what can be described as a long chain. These chains can be formed in many useful applications. A well known example is the styrofoam (polystyrene) coffee cup which is formed when liquid molecules of styrene react with each other or polymerize forming a solid, therefore changing the name from styrene to polystyrene (poly means many).
Protective clothing	Includes both respiratory and physical protection. One cannot assign a level of protection to clothing or respiratory devices separately. These levels were accepted and defined by response organizations such as U.S. Coast Guard, NIOSH, and U.S. EPA. Level A: SCBA plus totally encapsulating chemical resistant clothing (permeation resistant). Level B: SCBA plus hooded chemical resistant clothing (splash suit). Level C: Full or half-face respirator plus hooded chemical resistant clothing (splash suit). Level D: Coverall with no respiratory protection.
Pyrophoric	A material which ignites spontaneously upon exposure to air (or oxygen).
Radioactivity	The property of some substances to emit invisible and potentially harmful radiation.

## Glossary

Radiation Authority	As referred to in Guides 161 through 166 for radioactive materials, the Radiation Authority is either a Federal, state/provincial agency or state/province designated official. The responsibilities of this authority include evaluating radiological hazard conditions during normal operations and during emergencies. If the identity and telephone number of the authority are not known by emergency responders, or included in the local response plan, the information can be obtained from the agencies listed on the inside back cover. They maintain a periodically updated list of radiation authorities.
Refrigerated liquid	See "Cryogenic liquid".
Straight (solid) stream	Method used to apply or distribute water from the end of a hose. The water is delivered under pressure for penetration. In an efficient straight (solid) stream, approximately 90% of the water passes through an imaginary circle 38 cm (15 inches) in diameter at the breaking point. Hose (solid or straight) streams are frequently used to cool tanks and other equipment exposed to flammable liquid fires, or for washing burning spills away from danger points. However, straight streams will cause a spill fire to spread if improperly used or when directed into open containers of flammable and combustible liquids.
TIH	Toxic Inhalation Hazard. Term used to describe gases and volatile liquids that are toxic when inhaled. (Same as PIH)
Vapor density	Weight of a volume of pure vapor or gas (with no air present) compared to the weight of an equal volume of dry air at the same temperature and pressure. A vapor density less than 1 (one) indicates that the vapor is lighter than air and will tend to rise. A vapor density greater than 1 (one) indicates that the vapor is heavier than air and may travel along the ground.
Vapor pressure	Pressure at which a liquid and its vapor are in equilibrium at a given temperature. Liquids with high vapor pressures evaporate rapidly.
Viscosity	Measure of a liquid's internal resistance to flow. This property is important because it indicates how fast a material will leak out through holes in containers or tanks.

## Glossary

- Warm zone** Area between Hot and Cold zones where personnel and equipment decontamination and hot zone support take place. It includes control points for the access corridor and thus assists in reducing the spread of contamination. Also referred to as the contamination reduction corridor (CRC), contamination reduction zone (CRZ), yellow zone or limited access zone in other documents. (EPA Standard Operating Safety Guidelines, OSHA 29 CFR 1910.120, NFPA 472)
- Water-sensitive** Substances which may produce flammable and/or toxic decomposition products upon contact with water.
- Water spray (fog)** Method or way to apply or distribute water. The water is finely divided to provide for high heat absorption. Water spray patterns can range from about 10 to 90 degrees. Water spray streams can be used to extinguish or control the burning of a fire or to provide exposure protection for personnel, equipment, buildings, etc. **(This method can be used to absorb vapors, knock-down vapors or disperse vapors. Direct a water spray (fog), rather than a straight (solid) stream, into the vapor cloud to accomplish any of the above).**
- Water spray is particularly effective on fires of flammable liquids and volatile solids having flash points above 37.8°C (100°F).
- Regardless of the above, water spray can be used successfully on flammable liquids with low flash points. The effectiveness depends particularly on the method of application. With proper nozzles, even gasoline spill fires of some types have been extinguished when coordinated hose lines were used to sweep the flames off the surface of the liquid. Furthermore, water spray carefully applied has frequently been used with success in extinguishing fires involving flammable liquids with high flash points (or any viscous liquids) by causing frothing to occur only on the surface, and this foaming action blankets and extinguishes the fire.

## **PUBLICATION DATA**

The 2000 Emergency Response Guidebook (ERG2000) was prepared by the staff of Transport Canada, the U.S. Department of Transportation, and the Secretariat of Communications and Transport of Mexico with the assistance of many interested parties from government and industry.

ERG2000 is based on earlier Transport Canada, U.S. DOT, and Secretariat of Communications and Transport emergency response guidebooks. The Emergency Response Guidebook has been translated and printed in many languages, including French, Spanish, Chinese, German, Hebrew, Japanese, Portuguese, and Thai.

We encourage countries that wish to participate in future editions of the Guidebook to provide their emergency response center information for inclusion. Please contact any of the websites or telephone numbers in the paragraph below.

## **DISTRIBUTION OF THIS GUIDEBOOK**

The primary objective is to place one copy of the ERG2000 in each emergency service vehicle through distribution to Federal, state, provincial and local public safety authorities. The distribution of this guidebook is being accomplished through the voluntary cooperation of a network of key agencies. Emergency service organizations that have not yet received copies of ERG2000 should contact the respective distribution center in their country, state or province. In the U.S., information about the distribution center for your location may be obtained from the Hazardous Material Safety web site at <http://hazmat.dot.gov> or call 202-366-4900. In Canada, contact CANUTEC at 613-992-4624 or via the web site at <http://www.canutec.gc.ca> for information. In Mexico, call SCT at 52-5-684-1275 or 684-0188.

## **REPRODUCTION and RESALE**

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Constructive comments concerning ERG2000 are solicited; in particular, comments concerning its use in handling incidents involving dangerous goods. Comments should be addressed to:

**In Canada:**

Chief, CANUTEC  
Transport Dangerous Goods  
Transport Canada  
Ottawa, Ontario  
Canada K1A 0N5

Phone: 613-992-4624 (information)  
FAX: 613-954-5101  
Internet: [canutec@tc.gc.ca](mailto:canutec@tc.gc.ca)

**In the U.S.:**

U. S. Department of Transportation  
Research and Special Programs Administration  
Office of Hazardous Materials Initiatives and Training (DHM-50)  
Washington, DC 20590-0001

Phone: 202-366-4900  
FAX: 202-366-7342  
Internet: [welisten@rspa.dot.gov](mailto:welisten@rspa.dot.gov)

**In Mexico:**

Secretariat for Communications and Transport  
Land Transport Directorate  
Hazardous Materials and Wastes Directorate  
Calz. de las Bombas No. 411-9 piso  
Col. San Bartolo Coapa  
Coyoacan 04800, D.F.  
Mexico

Phone and FAX: 52-5-684-1275 and 684-0188

## NOTES

## NOTES

## NOTES



NOTES

## EMERGENCY RESPONSE TELEPHONE NUMBERS

### CANADA

1. CANUTEC

**613-996-6666**

(Collect calls are accepted)  
\*666 cellular (in Canada only)

### UNITED STATES

1. CHEMTREC®

**1-800-424-9300**

(Toll-free in the U.S., Canada, and the U.S. Virgin Islands)

**703-527-3887** For calls originating elsewhere

(Collect calls are accepted)

2. CHEM-TEL, INC.

**1-800-255-3924**

(Toll-free in the U.S., Canada, and the U.S. Virgin Islands)

**813-248-0585** For calls originating elsewhere

(Collect calls are accepted)

3. INFOTRAC

**1-800-535-5053**

(Toll-free in the U.S., Canada, and the U.S. Virgin Islands)

**352-323-3500** For calls originating elsewhere

(Collect calls are accepted)

4. 3E COMPANY

**1-800-451-8346**

(Toll-free in the U.S., Canada, and the U.S. Virgin Islands)

**760-602-8703** For calls originating elsewhere

(Collect calls are accepted)

5. MILITARY SHIPMENTS

**703-697-0218 - Explosives/ammunition incidents**

(Collect calls are accepted)

**1-800-851-8061 - All other dangerous goods incidents**

## EMERGENCY RESPONSE TELEPHONE NUMBERS

### MEXICO

#### 1. SETIQ

01-800-00-214-00 in the Mexican Republic  
For calls originating in Mexico City and the Metropolitan Area  
5559-1588  
For calls originating elsewhere, call  
0-11-52-5-559-1588

#### 2. CECOM

01-800-00-413-00 in the Mexican Republic  
For calls originating in Mexico City and the Metropolitan Area  
5550-1496, 5550-1552, 5550-1485 or 5550-4885  
For calls originating elsewhere, call  
0-11-52-5-550-1496, or 0-11-52-5-550-1552  
0-11-52-5-550-1485, or 0-11-52-5-550-4885

### BRAZIL

#### 1. PRÓ-QUÍMICA

0-800-118270  
(Toll-free in Brazil)  
55-11-232-1144 For calls originating elsewhere  
(Collect calls are accepted)

For additional details see the section entitled "WHO TO CALL FOR ASSISTANCE."

The Emergency Response Guidebook is normally revised and reissued every three or four years. However, in the event of a significant mistake, omission or change in the state of knowledge, special instructions to change the guidebook (in pen-and-ink, with paste-over stickers, or with a supplement) may be issued.

Users of this guidebook should check periodically (about every 6 months) to make sure their version is current. Changes should be annotated below. Contact:

**DOT/RSPA**

<http://hazmat.dot.gov/guidebook.htm>

**TRANSPORT CANADA**

<http://www.tc.gc.ca/canutec/en/guide/guide-e.htm>

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